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may 1954

MILCOR* Window Trim

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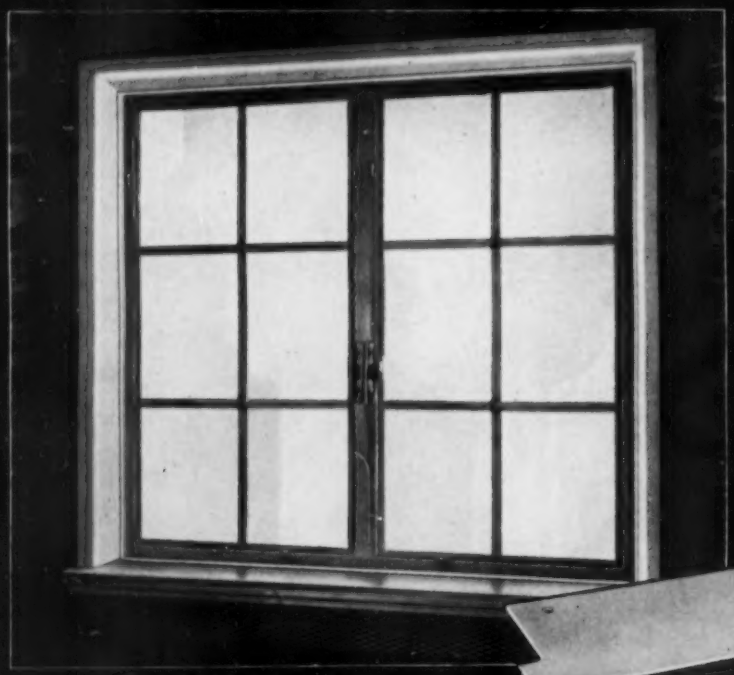
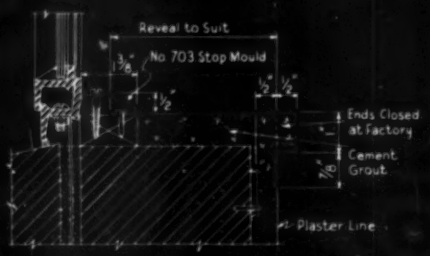


Milcor Window Stool No. 521 used with Window Trim No. 501, mitred and welded to form jambs and head, together with No. 703 stop mould for complete window trim.



Cross-section shows No. 521 installed where flat window stool is desired. Cement grouting is recommended for good construction.

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pa newsletter

May 1954

New York Chapter, AIA presented its Medal of Honor on March 30 to Harvey Wiley Corbett, 81-year-old New York architect "for his long and distinguished career in architecture and for his buildings which enhance the skyline of many cities." Award was made on occasion of 85th Anniversary Dinner of the Chapter.

Former AIA Tennessee Chapter has been split into four chapters—Memphis, Chattanooga, Middle Tennessee, and East Tennessee—all working together through newly founded Tennessee Society of Architects.

Outlook for building activity throughout nation is generally hopeful with present conditions better than anticipated last October. Estimate is according to reports of AIA Board members made at Directors' Meeting in March. Of new work coming into architectural offices, schools are leading in every region with commercial work strong in almost all parts of the country. All 12 regions reported activity by architects in development housing field.

As of January 1, Federal loans and grants have been approved for redevelopment of 52 slum areas in 32 cities which HHFA Administrator Cole estimates will result in construction outlay of almost $500-millions. Areas make up about one-third of 154 slum areas in or near actual development stage of local slum clearance and urban redevelopment programs. In millions of dollars, breakdown of outlay shows 271.3 for housing, 53.5 for commercial construction, 48.0 for industrial construction, 107.7 for public and semipublic construction, and 16.7 for site improvements.

The National Association of Registered Architects has been incorporated under Missouri law as nonprofit corporation with 21 Missouri architects as incorporators. First officers are Harold A. Casey, Springfield, President; Rex L. Becker, St. Louis, Secretary; and William R. Bovard, Kansas City, Treasurer. Purposes of Association include promotion of better understanding between registered architects, exchange of information, gathering and releasing of information on architects and their services, and study, co-operation with architectural registration boards, and recommendations concerning architectural registration laws. For membership, architect must be registered and in good standing in home state.

According to American Bankers Association's survey of 4700 bank reports, bank construction in 1954 (new buildings, expansion, and modernization programs) will total approximately $475-millions. Construction budgets reported by 1262 banks amounted to just under $160-millions, believed to cover about one-third of bank expansion programs actually being undertaken this year. Association reveals that substantial portion of new building will be in Midwest and that designs reported were 371 Traditional, 88 Colonial, and 566 Modern.

Distinguished French Architect Auguste Perret died in Paris in February at the age of 80. Famous for introducing use of concrete in private and religious structures, Perret's well-known designs include those for Église Raincy; Concert Hall, École Normale de Musique; and Théatre de Champs-Elysées. His last great work was in reconstruction of Le Havre where greatest war damage in France occurred.

Turn page for WASHINGTON PERSPECTIVE

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newsletter

Frederick Gutheim

Washington Perspective

The parts of the Eisenhower "dynamic and progressive program" which seem most likely to be enacted before Congress adjourns in this election year include most of those which have interested architects: a good part of the housing program and the health-hospital program. Along with these is an item of old business left over from the 82nd Congress, the lease-purchase bill to provide much-needed office-building space for Federal departments.

The main criticism that will be leveled against the Administration in this fall's elections will be against failure to meet the challenge of the expanding American economy. "The significant question," "The Washington Post" points out, "is not whether we shall have a slump this year, but whether government and business working together will be able to stimulate the tremendous new investment and consumption necessary to prevent a paralyzing depression a few years hence." What is the base line for national economic performance? For some years, many economists have been preoccupied with the problems of national growth. It was the main theme of the monumental Twentieth Century Foundation study, "America's Needs and Resources." It has furnished some of the most engaging topics of the President's Council of Economic Advisers. It was the burden of the criticisms of Harvard Prof. Alvin C. Hansen in his recent testimony before the Joint Committee on the Economic Report. By now this idea has gained terrific impact. Once the facts of population growth, family formation, urbanization, increasing standards of living are understood and accepted, their outcome in productivity must be acknowledged. This growth is translated into the fundamental demand for houses, schools, medical care facilities, industrial plants, distributive facilities, and goods of all sorts. As such it is the major factor in the demand for architectural services, as well as the growth of an architectural profession to provide them.

It is hard to recall a time when Congress needed more to show enlightened interest in the physical aspects of the capital. The casual butchery of the city's famous park system by a series of ill-conceived highway, bridge, and development measures is about to become a national scandal. In immediate prospect are measures which would turn the natural scenic beauties of Rock Creek Park into a heavy-duty expressway; desecrate Theodore Roosevelt Memorial Island in the Potomac River and further compromise the Potomac Park system; and violate other park lands in the name of cheap and immediate solutions to parking and traffic problems. The recommendation of the Fine Arts Commission, The National Park Service, The National Capital Planning Commission, and responsible professional organizations are flouted by highway engineers and city officials intent upon narrowly conceived solutions which Congress finds palatable, because they appear to be economical. The stage seems set for a repetition of the Dark Ages of the last century when the Mall was criss-crossed by railroad tracks and terminals—all in the name of Progress. Certainly no one in the present Administration has yet shown the enlightened interest or attained the authority of Herbert Hoover and Andrew Mellon in 1926, or of Sen. James McMillan in 1901. It has been unable to criticize even the incredibly misconceived redevelopment scheme for Southwest Washington offered by William Zeckendorf, with much beating of promotional drums. The plan has connection with neither reality nor redevelopment, and lacks any relationship to the rest of the city. Locally termed "the Big Z," it might better be called "the Big X."

In the Capitol, the recent remodeling work on the Senate and House chambers is now to be further altered by a Congress to which the idea of security gained a more immediate meaning after the recent shooting. Bullet-proof glass to separate the gallery visitors from the legislators is the most favored solution at the moment, but they can't stop there if any visitors are to hear what's being said on the floor. At the White House, tighter security measures also are being invoked. Presidential recreations of painting and pitch-putt games on the south lawn are being frowned upon, trips out of town are being restricted. More and more, the President is being cramped into the safe but boring routine imposed upon President Truman after the attempt on his life—featuring activities in the informal top-floor solarium of the White House, or at his fishing camp in the nearby Catoctin mountains.

Other changes in the Federal City appear imminent. GSA Administrator Edward F. Mansure has predicted substantial government office-building activity here, as soon as the Senate passes the lease-purchase bill. This measure offers an installment plan device for buying new Federal buildings over lease periods up to 25 years. Although costing more, of course, the proposal gets around the capital-outlay difficulty. Mansure indicated the program would allow the replacement of present "temporary" office buildings in Washington parks erected during the last two wars. He has given no indication whether this would result in a central-area building program, or a revival of the so-called "dispersal" plan to develop outlying office-building centers conforming to civil defense recommendations. The essential objective here, certainly, should be to secure a net reduction in downtown employment and other densities—and a corresponding lightening of parking, traffic, bridge, and other central-area problems.

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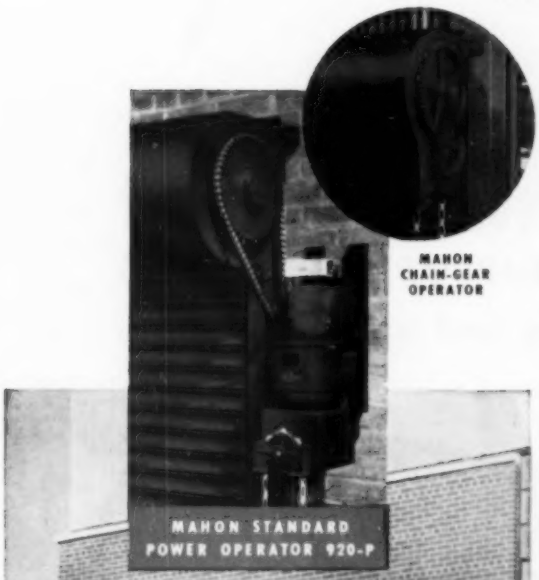

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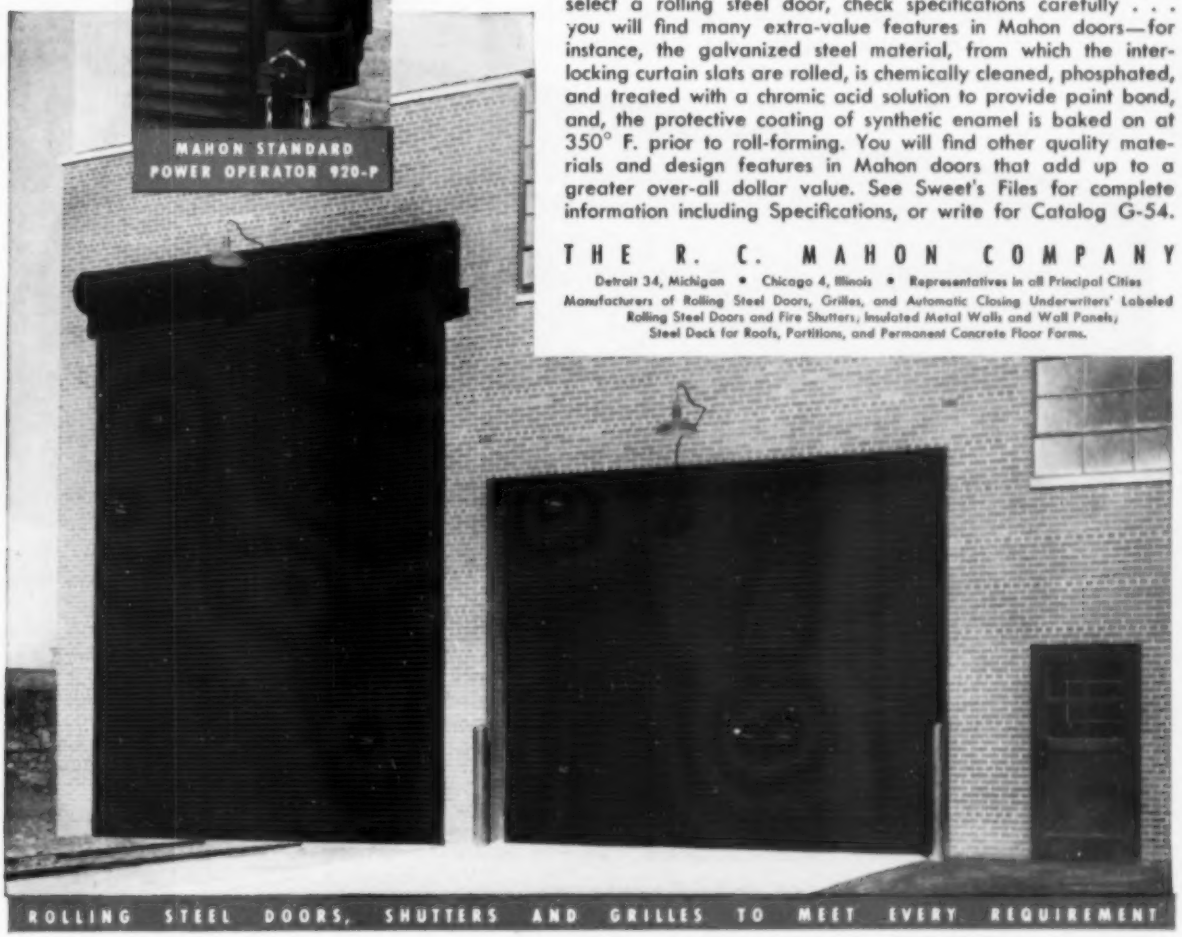

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PROGRESSIVE ARCHITECTURE

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May 1954

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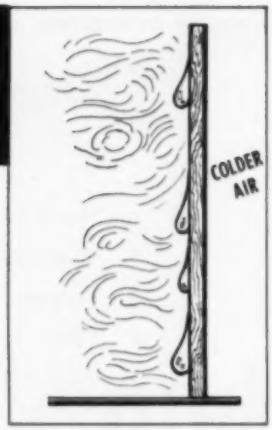
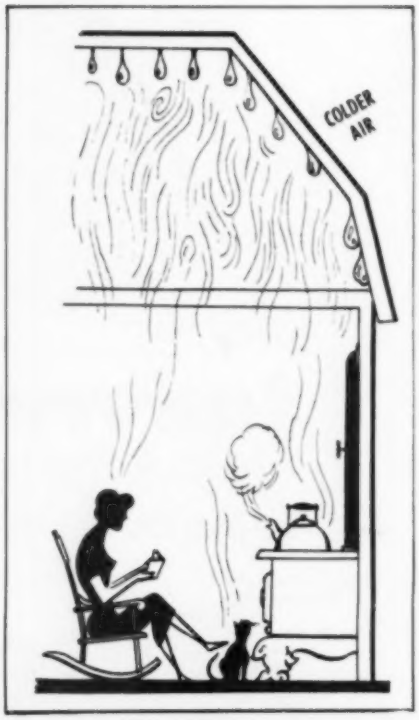
How to Stop CONDENSATION!

Prevent Damage to Wood, Plaster, Paint, etc.



Condensation forms when temperature of contacting air is reduced below dew-point by a cold surface.



Condensation forms when the capacity of an air space at a given temperature is too small for the amount of vapor present. →

As air grows colder, it can hold less vapor in suspension. The degree of saturation increases until a dew-point is reached, and condensation occurs. The surface of a material colder than contacting air it faces which continuously loses heat on the other side, continuously extracts heat by conduction from the air it faces. The denser and bulkier the material, the more heat it can extract before attaining room temperature, if it *ever* does.

The scientific construction of multiple layers of accordion aluminum, fiber, and air minimizes condensation formation on or within this type of insulation. The reason: The temperature of the air in the warm room and the adjacent sheet of aluminum is about the same. Because the aluminum sheet weighs only ¼ oz. per sq. ft.; has heat ray absorptivity and emissivity of only 3%; it extracts from the air by conduction only enough heat to attain and remain at room temperature.

Since the other sheets of aluminum and fiber retard heat flow by inner as well as outer convection, and conduction is low because of preponderant air spaces of low density, the sheet's other surface faces a space which is only a *little* colder than the aluminum itself. Because warmth flows to cold in radiation and conduction, the aluminum will *give off a slight* amount of *heat* to the colder space, thereby slightly *increasing* the vapor retaining capacity of that space. The succeeding reflective spaces and aluminum sheets behave similarly. Since each aluminum surface is slightly warmer than the air it faces on its cold side, there is no extraction of heat. *(The reverse is true.)*

Where multiple accordion aluminum is used, fortuitous vapor and water (like rain) which intrude into building spaces will, as the vapor pressure develops therein, gradually flow out as vapor through exterior walls and roofs because vapor flows from areas of greater to less density. Since the vapor cannot back up through the continuous, impervious aluminum, it will flow out because exterior walls and roofs have substantial permeability in comparison (with the aluminum), far greater than the required 5:1 ratio.

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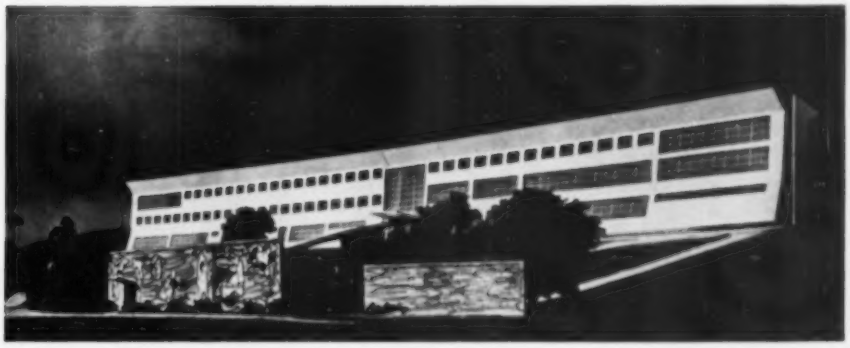

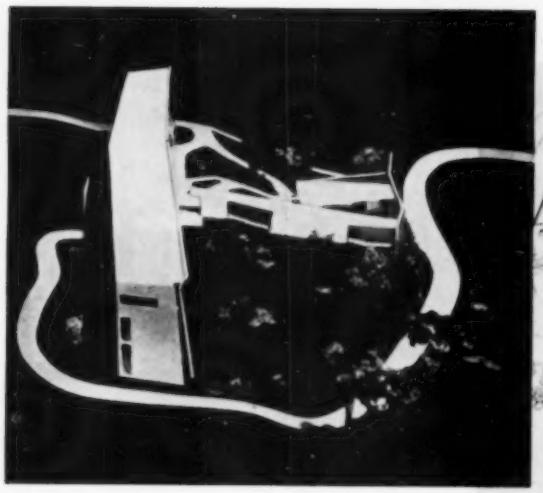

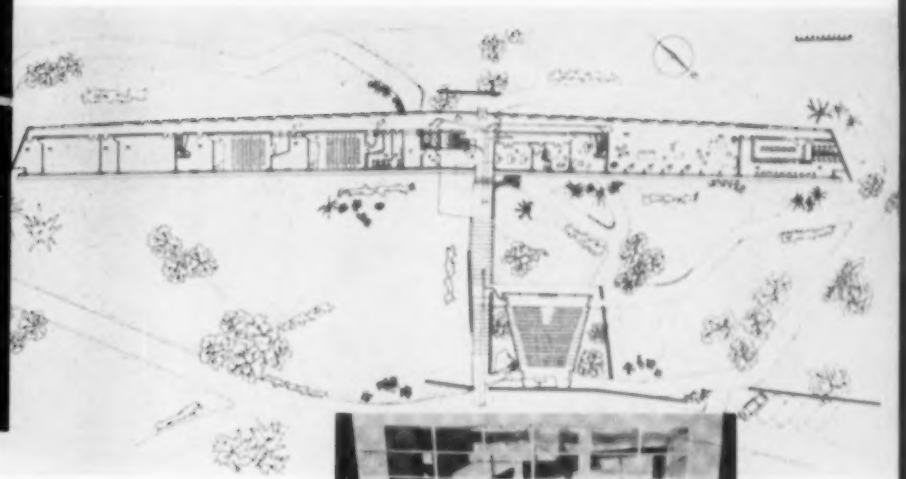

nuclear physics research building

When commissioned by the Italian colony of São Paulo, Brazil, to design for the new University City a Research Institute of Nuclear Physics to be donated by the colony during São Paulo's Fourth Centennial celebration this summer, Architect Gio Ponti of Milan, Italy, welcomed the opportunity to express the importance of the Italian tribute to Brazil and also to project his own architectural concept of "defining without closing."

The research laboratory and classroom building, shown here in model stage, is notable for its principal façade sloping outward at top and bottom, open at the ends and apparently suspended—thus avoiding a closing of the building mass. Ponti sought in this way to give lightness and movement to the wings of the structure. The "slimness" of the mass is further accentuated by tapering of the plan (*above*) by reducing the corridor widths at either end. The main stair (*detail above*) is self-supporting.

shopping center for both city and suburbs

Reluctance to disturb the historic charm and 18th Century scale of old Charleston, South Carolina, by major commercial encroachment has led to the development of a large shopping center located two miles from the downtown center at a point convenient for city dwellers as well as the rapidly growing suburban population. Thus further congestion of city traffic in the narrow streets and lanes will be avoided, and the developers will take advantage of the economies of a larger and cheaper site.

The sketches (*above*) indicate the free, open planning and the unpretentious architecture proposed by Augustus E. Constantine, Charleston Architect, and I. E. Saporta, Atlanta Planning Consultant. The planners have provided for 140,000 sq ft of shopping area, plus a theater, restaurants, laundry pick-up station, post office, bank, ample parking area, playgrounds for children, and other amenities. The buildings are all fireproof.

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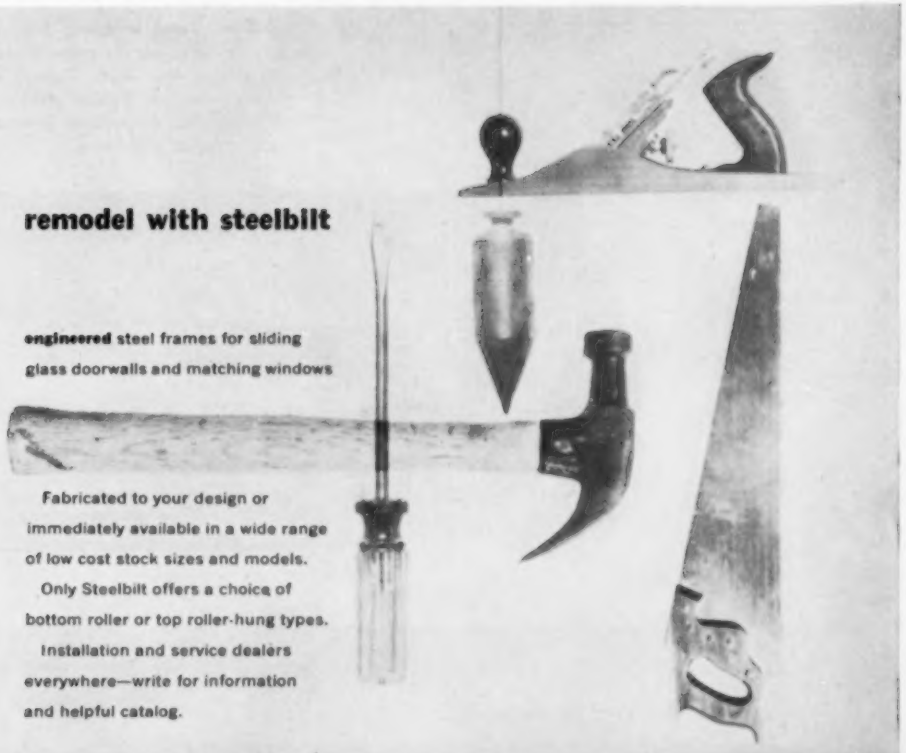

before

STEELBILT

Steelbilt, Inc.

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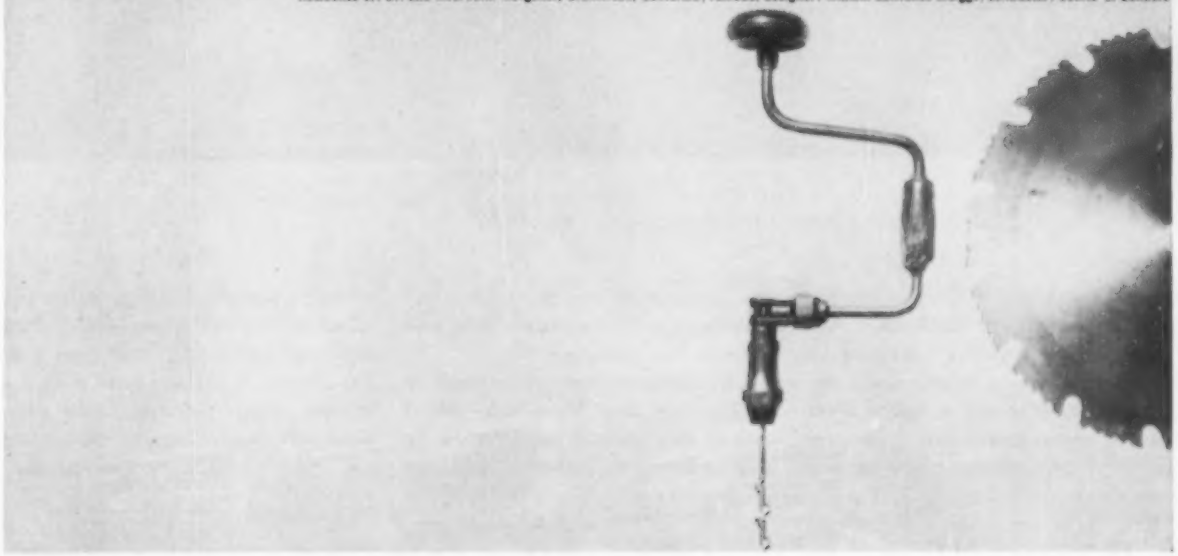
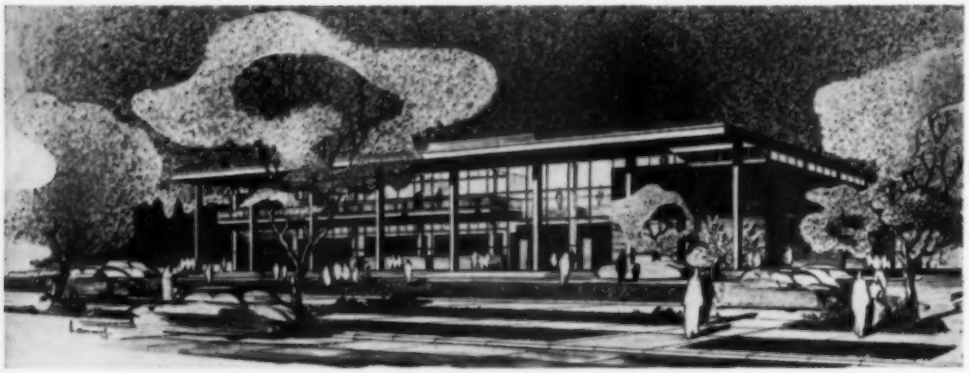
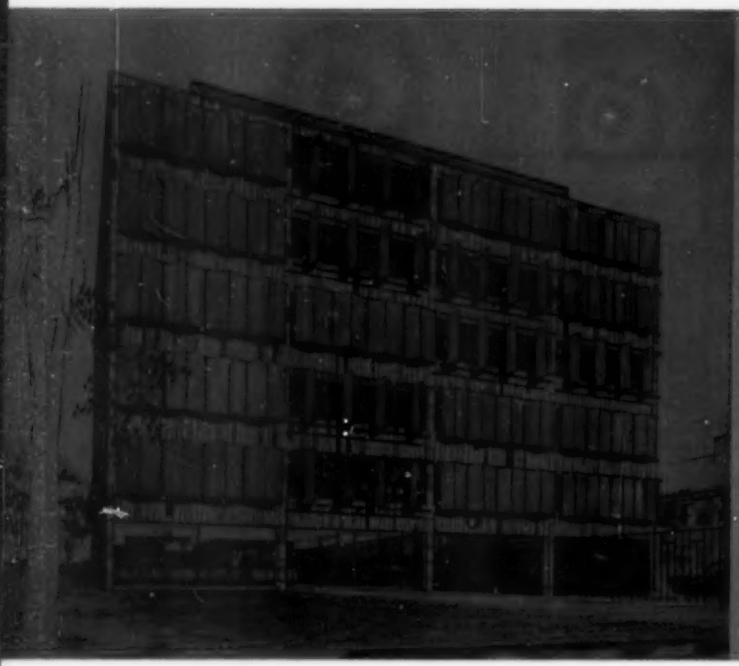
after

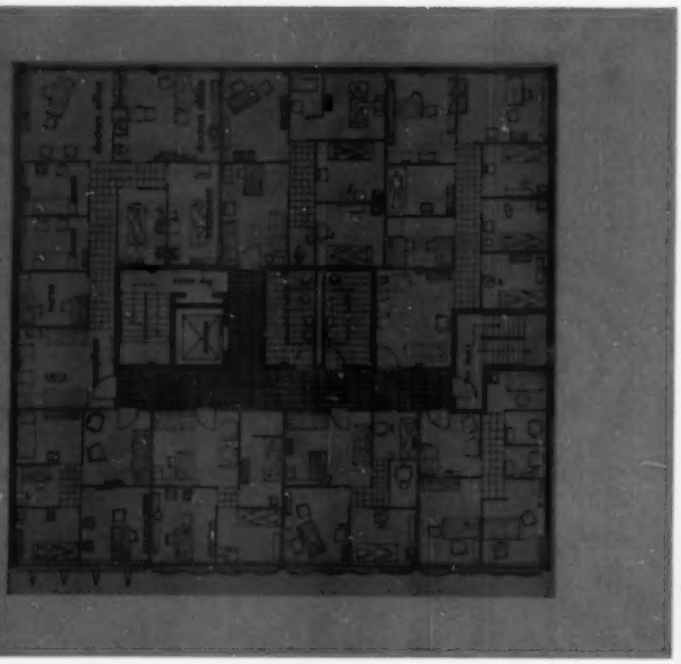
Residence of: Dr. and Mrs. John Mergener, Brentwood, California / remodel designer: William Lawrence Meiggs / contractor: Cedric E. Sanders



student union building *Tall columns, two-story veranda, and spacious plan are the regional characteristics of this structure for North Carolina State College at Raleigh, designed by Wm. Henley Deitrick, Raleigh Architect, with Porter Butts, Madison, Wisconsin, as Consultant. Structure has concrete frame, exterior walls of glass and brick.*







professional building for physicians, surgeons, dentists

Nearing completion in Atlanta, Georgia, is the six-story Cyrus W. Strickler, Sr., Doctors Building (*above*) designed by Toombs & Company, Atlanta Architects. The offices will occupy a square tower rising above a ground-floor drug store and driveways giving access to parking area provided at rear for tenants and their patients. The elevator lobby also opens on this driveway.

The reinforced-concrete frame will be faced on the main front with vertical slabs of gray and pink marbles. As the building faces west, perforated aluminum shutters are provided for sun control and to lighten the air-conditioning load. Note the "bent" closed position of these shutters, devised by the architects to lend a baroque touch. Venetian blinds, acoustical ceilings, and fluorescent lighting also will be provided for the tenants.

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Crawford
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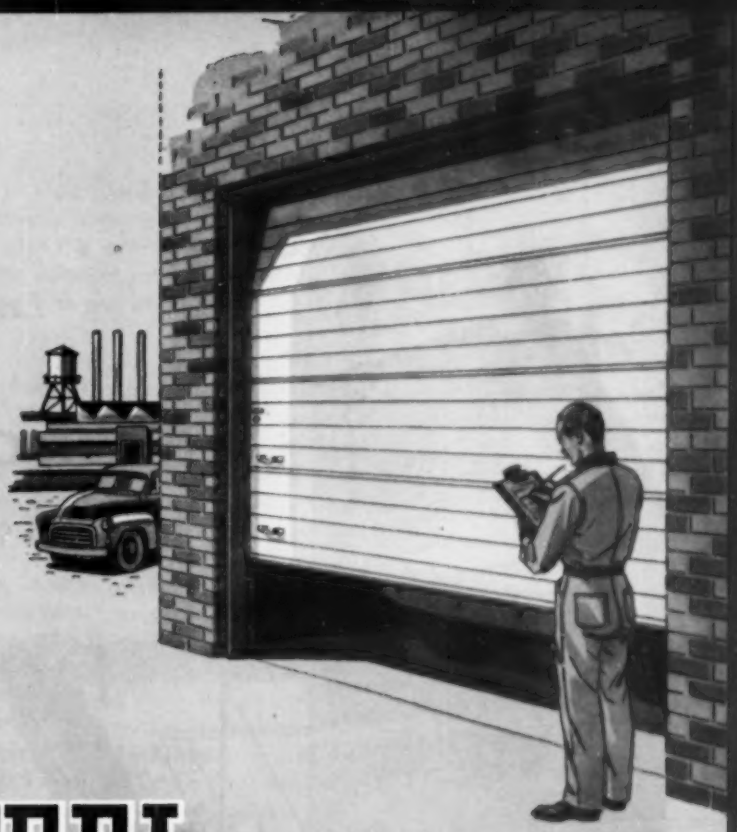

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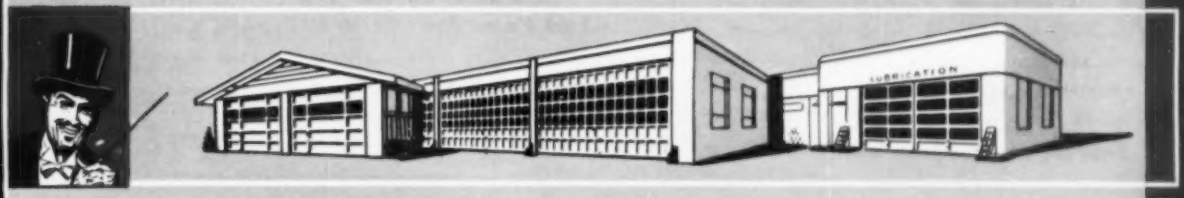

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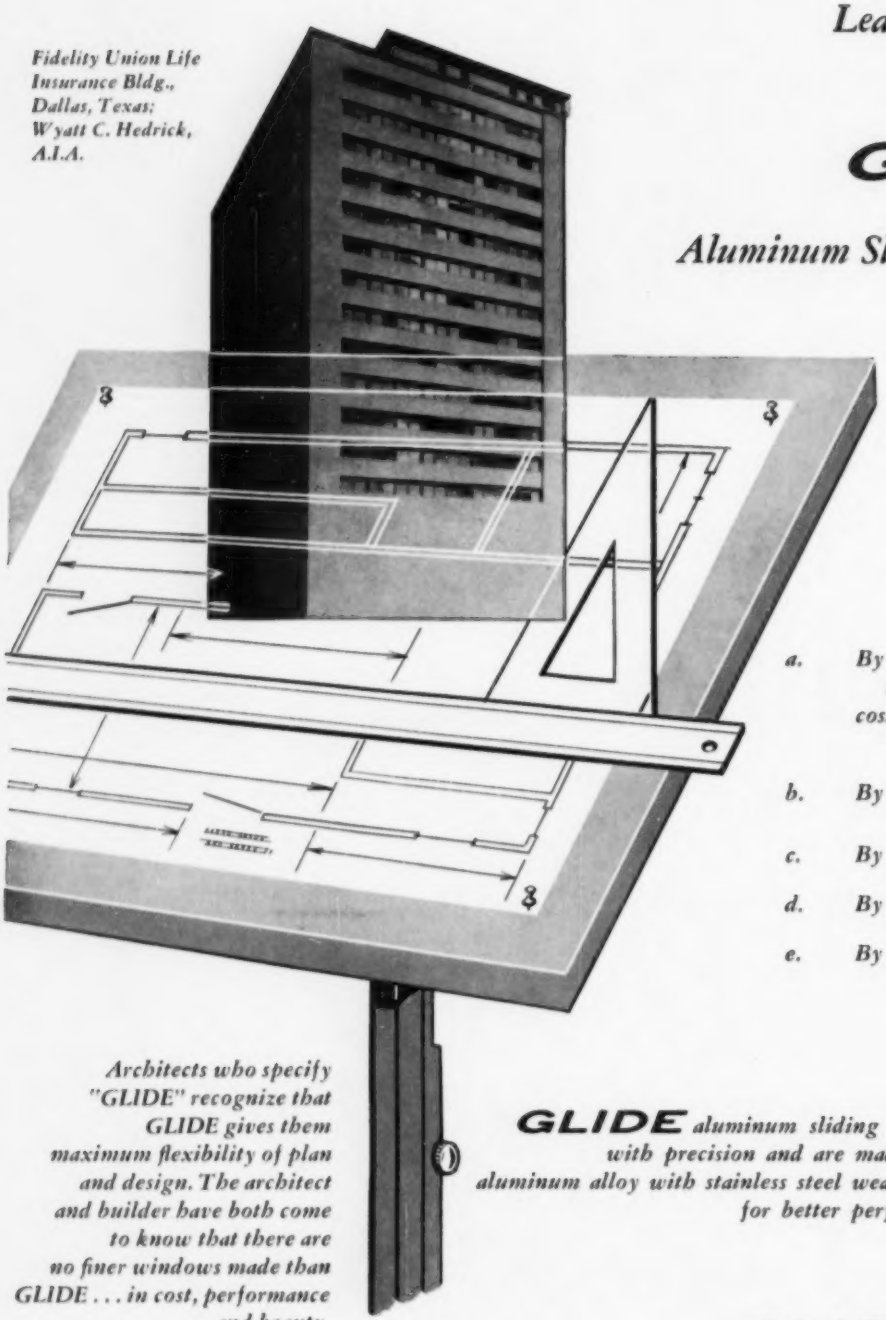

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Opinions of the Yale Art Gallery and Design Center exchanged among architectural notables attending the opening of the new building were so varied that P/A invited the discerning visitors to contribute their views this month—supplementing the P/A presentation of the Gallery, starting on page 88.

block of space

Dear Editor: The decision to treat the new Yale Fine Arts Building as a block of space, to be divided and redivided as needs require, is a splendid piece of architectural statesmanship. Granted the validity of the major decision, and it strikes me as unquestionable, any comments about detail in executing the concept become of very minor importance.

Where pedagogical methods are in flux, flexibility of space is a necessity, and Yale will now be able to shift partitions with every shift in direction and intensity of the architectural breeze. Unfortunately, I saw the building in a snow storm, but I saw enough to like it from the outside. I assume the blank wall is the result of traffic on the adjacent street. Anyone who has tried to teach to the tune of taxi horns will know what a top excuse the architect had for doing a fine plain wall. I like the way you get into the building and of course I was immediately intrigued with the "space frame" construction. How intrigued I would stay, were I Yale student or faculty member, I am not sure.

The discipline that Kahn enforces by minimizing interior color is a noble one, and based, I assume, on the honesty of materials in natural state, but I find it a little hard to be noble for so long, throughout the entire building. The relationship of museum and school of architecture is beautifully worked out and should be a healthy one for both.

To come back to the "space frame" which is exposed throughout, I was pleased with its acoustical properties, but question its light absorption and visual insistence. Incidentally, a high price seems to have been paid, spacewise, for the romanticism of a triangular stair plan within a round stair tower within a rectangular building. The interior classrooms seem excellent, and it is good to see the common-sense aspects of progressive education at last reaching the levels of higher learning, by osmosis, I suppose. The open office planning, where faculty sit behind filing cabinets, I would have none of. Both student and teacher are entitled to some privacy, I think, both from and with each other.

Yale now has a building worthy of its School of Architecture.

ROBERT W. MCLAUGHLIN, Director
School of Architecture
Princeton University
Princeton, N. J.

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much impressed

Dear Editor: Your letter reached me some days ago. I was, as you say, present at the dedication ceremonies of the new Design Laboratory at Yale and was much impressed with the building as a whole. Unfortunately I arrived rather late in the evening and could not see, as I wished, the treatment of the exterior, which I understand is quite straightforward and satisfactory.

To me, the three-dimensional, ceiling-floor diaphragm is very successful and interesting in effect. I do think, however, that the lighting is as yet not satisfactorily solved. This gives the ceiling an unfortunate impression of weight and, consequently, diminishes the effect of the ceiling height. I also believe that there might be a more satisfactory solution for the lighting in the drafting rooms. The innumerable dropped wires are certainly not esthetic and might even be dangerous at times. However, the whole ceiling system has great possibilities.

Also, the standard-size partition units are extremely ingenious and their flexibility will certainly be more than appreciated by the Museum's people.

Another criticism I might make concerns the main staircase which, to me, appears to be cramped. Also the roughness of the material is not satisfying in this particular location.

On the whole, however, the building is exciting and, I am sure, will be extremely serviceable. Louis Kahn should be congratulated on the design and Yale University should be congratulated on having a good contemporary building for their art gallery.

LEOPOLD ARNAUD, Dean
School of Architecture
Columbia University
New York, N. Y.

bold decision

Dear Editor: A university by its very nature is dedicated to a tireless quest for knowledge and a constant exploration of new frontiers. Why this dedication should not extend to the art of architecture and find expression in the outward forms of the university's fabric it is difficult to say. Yet past performances of universities have made it natural for us to evince surprise when a great institution adds a modern building to its traditional fabric.

Yale is not unique in making such a bold decision to engage an architect who was bound to explore new methods of construction, new forms, and solutions in the same spirit that the scholars of the faculty tackle their own special problems. The work of Aalto, Anderson & Beckwith and Saarinen at M. I. T. and of Gropius at Harvard preceded Yale's decision. The problem, however, at Yale was made infinitely more difficult because of the closeness of the tie of the new structure to the existing buildings.

The gallery is an outstanding piece of architecture. This is not due solely to its architect's fine sense of structural innovation, the functional soundness of the solution, and its gentlemanly attitude towards its neighbors. These are all com-

(Continued on page 16)

(Continued from page 15)

mendable attributes but of themselves do not assure great architecture. Indeed the gallery achieves architectural distinction because here art is in control of the technologies of building. Whatever shortcomings might be pointed out are hardly sufficient to dim my enthusiasm for an outstanding creative effort.

The basic architectural concept of flexible space, so necessary and proper in such a building, gives character and quality when handled with such superb understanding of the indissoluble unity of space, lighting, structure, and function. The vigorous handling of the stair enclosure, the elevators, and service core lends subtlety and variety to the spaces defined. The ceiling is a superb unifier of space as well as an efficient machine. The somewhat arbitrary windowless street façade provides a foil for the dramatic entrance while simultaneously making it possible to blend the new with the old with a minimum of violence. Yet this ingenious solution of the entrance has compromised the basic concept of a wholly flexible interior space. Flexibility is seriously reduced by this concession and is further sacrificed on those floors where enclosed offices (whose partitions appear all too permanent) conceal the basic form of structure and of space. In contrast the flexible partitions of the gallery reveal rather than conceal the whole and yet provide the variety of experience so necessary to increase the visitors' enjoyment.

Weighed against such criticisms should be the sense of friendly fellowship with its older neighbors. Here will be found a creation in the true tradition of freedom and fearless intellectual exploration for which Yale stands.

G. HOLMES PERKINS, Dean
The School of Fine Arts
University of Pennsylvania
Philadelphia, Pa.

The Clyde Lyon School, Glenview, Illinois, built with Teco trussed rafters fabricated by McKeown Bros. Co., Chicago.

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outstanding

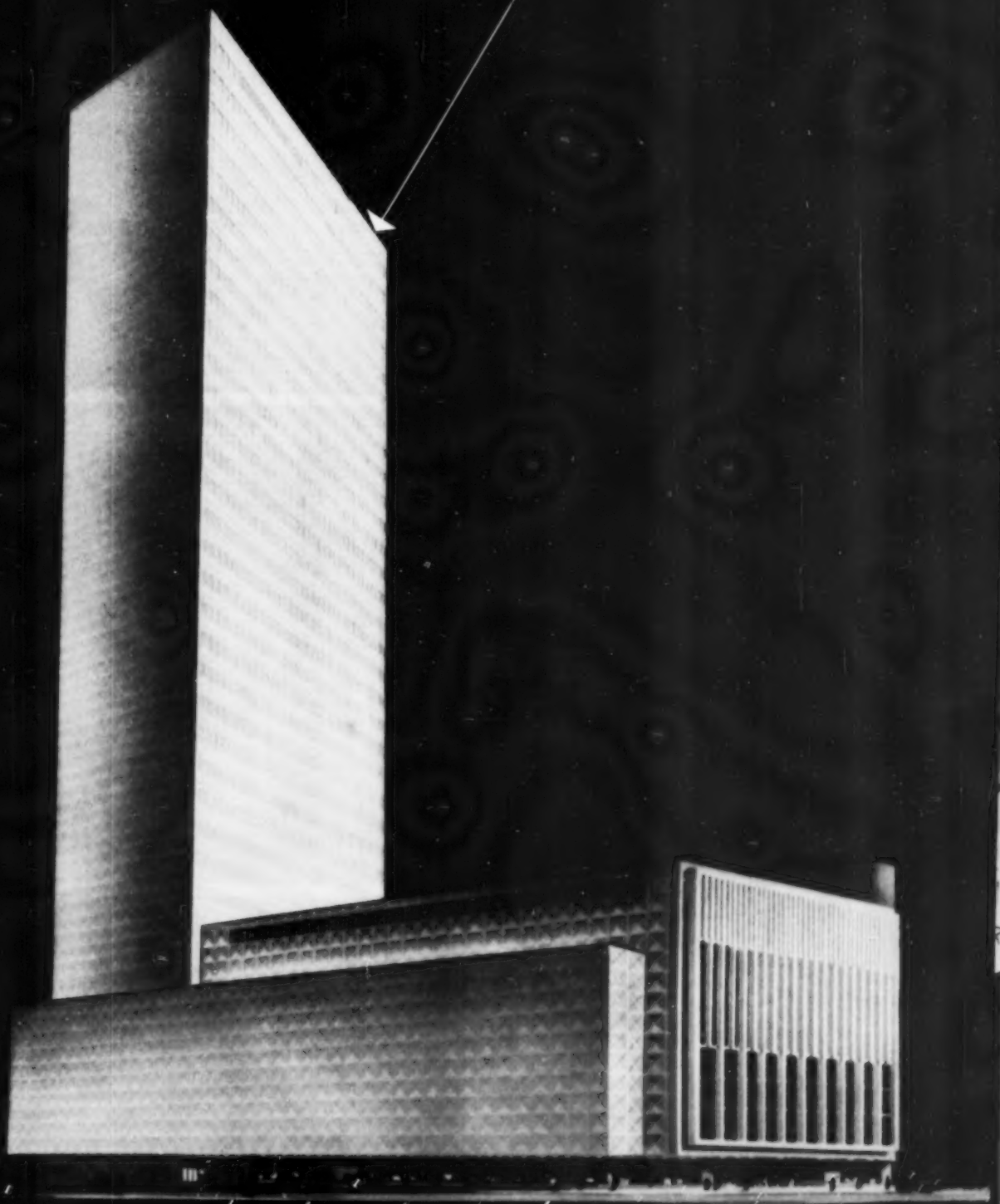
Dear Editor: This is the outstanding academic building produced by the modern movement. Here is a building quiet and modest, composed in a background palette of anonymous materials, relieved by people, lighting, and imaginative architectural detail. It is a building whose atmosphere is as definite as it is fresh.

Fully mechanized, it is not mechanical. One of the highest functions of modern building design is to liberate technology, to enlarge its possible applications. When that is done, a high technology of itself does not destroy human values or human scale. The demonstration at Yale, however, argues that to allow men to make the most of their technology art must control and qualify.

Rarely is a building of such technical interest realized with such refinement. Here structure is so integral with architecture it has acquired the value of ornament. The building is not only great in itself but also it opens the door to an entire, new architectural development.

(Continued on page 22)

Look inside for details on the thinnest curtain wall!



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The window design departs from the small, separate windows of the Alcoa Building in favor of a continuous design which permits flexible partitioning. Retained are the double-glazed, vertically pivoted, aluminum frames.

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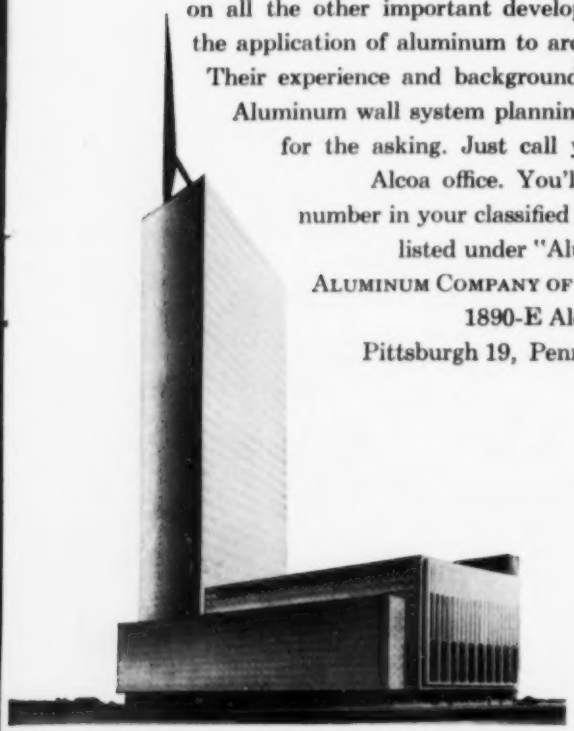
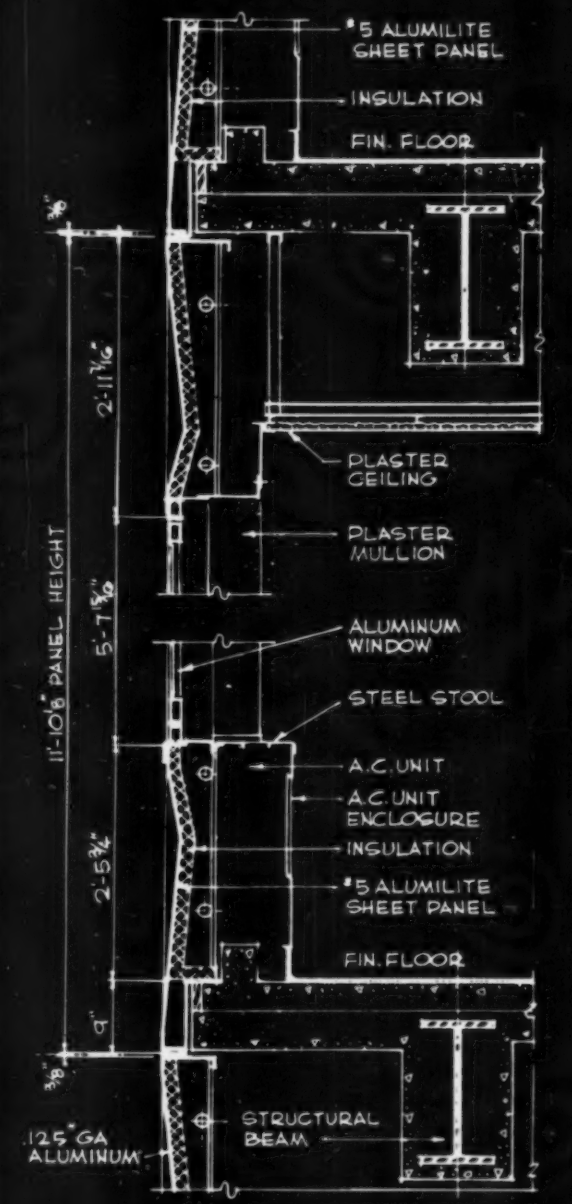
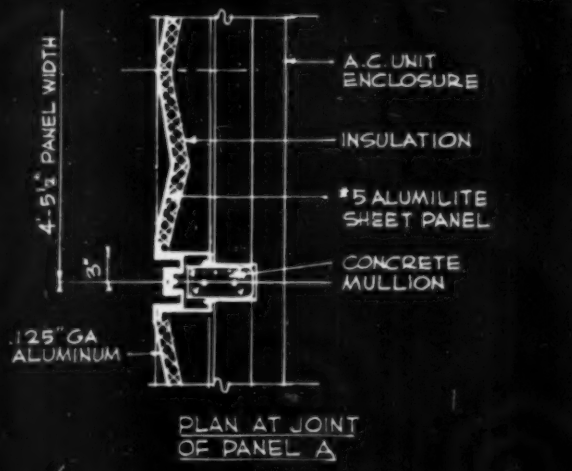




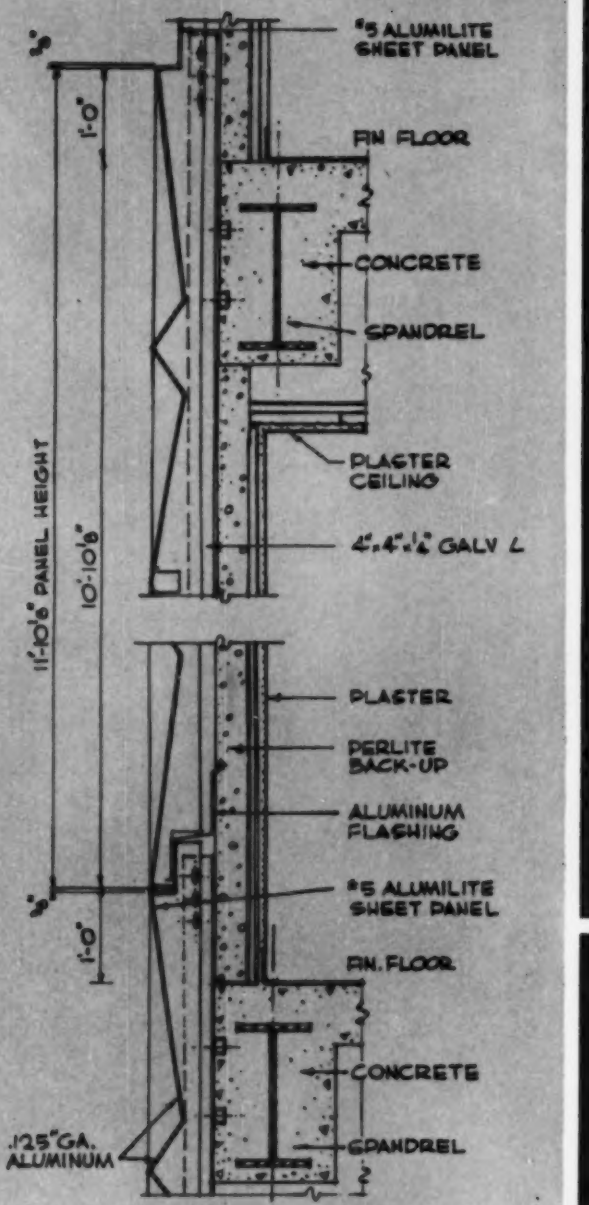
PANEL A
TYPICAL OF THREE WALLS

WALL SECTIONS

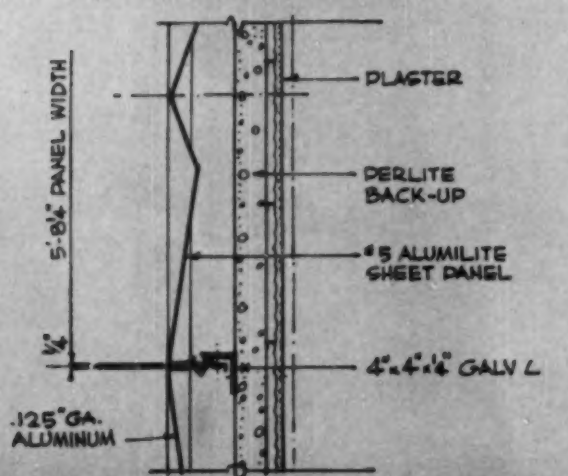
SCALE 0 2 3 FEET



PLAN AT JOINT OF PANEL A



PANEL B
TYPICAL OF ONE WALL



PLAN AT JOINT OF PANEL B

CREDITS

Harrison & Abramovitz, Gill & Harrell, *architects*

Jaros, Baum & Bolles, Zumwalt & Vinther, *mechanical and electrical engineers*

Edwards & Hjorth, *structural engineers*

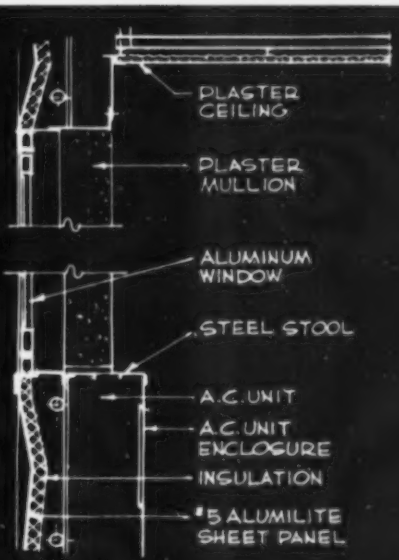
J. W. Bateson, *general contractor*

Flour City Ornamental Iron Company, *subcontractor, aluminum*

PANEL A—typical of three walls, incorporates windows pivoted on vertical axis. ⅛" anodic-treated aluminum sheet is backed only by 1½" of aluminum foil vapor seal insulation.

PANEL B—west wall is sheathed completely with light aluminum panels that contrast with the continuous windows on other three sides. ⅛" aluminum panel has perlite back-up.

WINDOW—detail shows 5' 7 15/16" double-glazed, vertically pivoted windows, set in 11' 10⅛" by 4' 5¾" aluminum panel. Panel weighs only four pounds per square foot.



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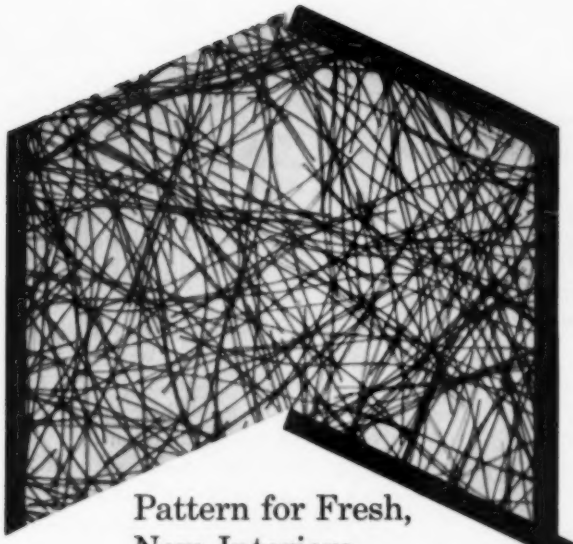

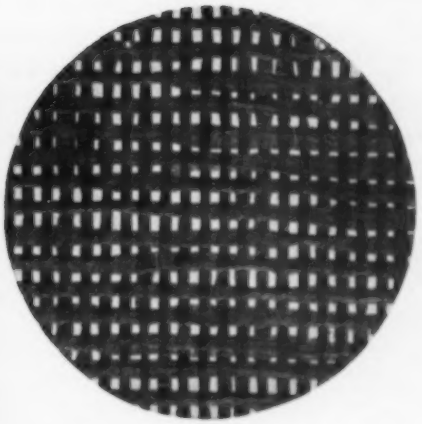

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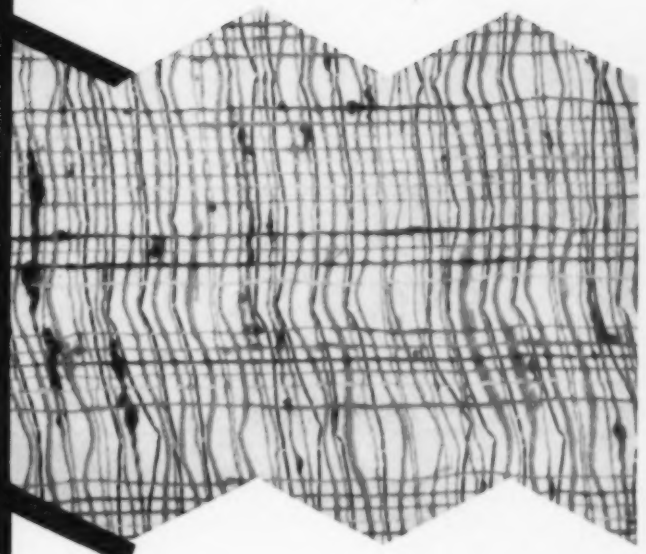

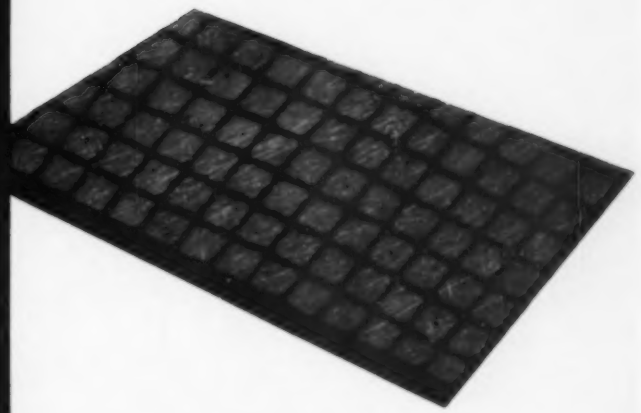

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p/a views

(Continued from page 14)

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FREDERICK GUTHEIM

* *This comment is a composite of a recent letter from Gutheim and excerpts from a piece about the Yale building that he wrote for* The New York Herald-Tribune, *November 11, 1953.*

complicated and delicate

Dear Editor: It is encouraging to see a building that has the quality of monumental, bold design—which is very rare today. Modern architects have as a rule tended toward more complicated and delicate design, and the Yale University Art Gallery, with its remarkable ceiling pattern making use of rough concrete and its walls of unpainted cement blocks, follows a new trend toward a more sculptural expression in architecture which possibly started with Le Corbusier's apartments in Marseilles.

The trend in the early '20s and '30s was toward extremely light structures, where every part of the building had a minimum section, according to strict structural requirements. I believe that we all feel today the need of changes in the character of buildings, emphasizing a more sculptural quality, especially in some public structures of a more monumental type. The ceiling of the Yale University Art Gallery and Design Center is a good example of this monumental treatment because, besides its functional design, it has remarkable sculptural quality. The cylindrical stair well, also in rough concrete, and the disposition of stairs in straight sections contrasting with the curved walls, is effective and interesting.

JOSÉ LUIS SERT, Dean
Graduate School of Design
Harvard University
Cambridge, Mass.

making theory work

Dear Editor: An experience such as working out the Yale University Art Gallery and Design Center is a privilege given to few builders. It had its serious problems and many headaches, the most important being to orient a production group into an experimental environment, still maintaining efficient production and cost control.

Louis Kahn's forward-looking and experimental theories were always intriguing. The tempering of these ideas by Douglas Orr and his associates made possible a practical execution of experimental ideas.

We think the tetrahedron construction is practical and as economical as standard construction, plus furred ceilings and the like, for this type of problem. The tetrahedron forming and pouring were complicated to work out. The heavy rib forms lifted, pivoting on the cross-rib form; the crossing of rods in three directions caused serious voids. The forms had to be tied down, a novel problem; and hand tamping by special tools

(Continued on page 24)

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p/a views

(Continued from page 22)

was required in place of mechanical vibration. It gave all of us in this organization a challenge and a feeling of accomplishment when we obtained control of the false work and the pouring operation.

As builders we do not see eye to eye with Kahn in the special usage of structural false work to obtain artificial results. The narrow face (two inches wide) boards used for column, beam, and silo forming to obtain close parallel lines on the concrete surfaces we do not consider functional. They perhaps recall methods of the past but do not provide the functional boldness or sincerity of structure developed by the normal large sheet of plywood or metal form. This narrow-faced form work, the special sizes of concrete blocks, the floor-to-ceiling structural channel frames, and the like are the kinds of things that cost excessively; and in our opinion go into the field of special veneers rather than honest fundamental expressions of structural elements used for finish surfaces.

We have heard many comments about the long spans and wide open areas obtained by the tetrahedron construction. We point out that these spans and wide open spaces may be obtained with any standard construction.

The so-called pogo panel partitions are, in our opinion, in a similar category to the tetrahedron construction—an experimental idea brought into the practical range. We think that the combination of the exposed structure on the ceiling with the mobile pogo-panel partitions is a great step forward in providing a mobility of usage in a practical manner; in the long run less expensive than the conventional fixed units.

As an education in making theoretical ideas work, we feel that our experience on the Design Center was a great stimulant for all of us. We hope we shall have the opportunity again to work with forward-looking people such as Kahn and Orr in developing more experimental ideas into practical structures.

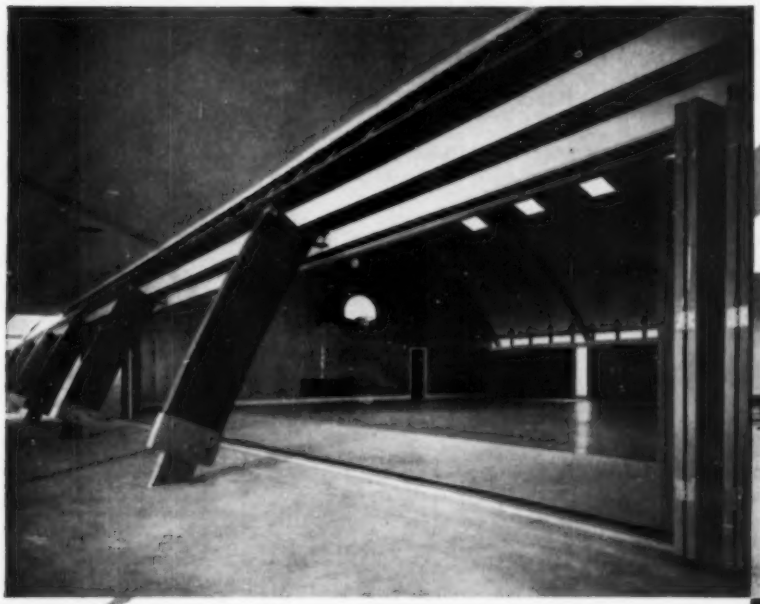
C. CLARK MACOMBER, President
George B. H. Macomber Co., Builders
Boston, Mass.

educating the public

Dear Editor: You are to be highly commended for your very fine P.S. in February 1954 P/A pertaining to obvious neglect on the part of the professional organizations as to their follow-through of public relations programs.

The organizations and Chapter committees are shirking their responsibility of properly educating the public as to the meaning and function of the architect; therefore the architect himself must not only act as interpreter of the times, by his structures, but also of greatest importance, as an educator to show each client the important part he plays in setting up order in the community. BURTON GLASS
Chicago, Ill.

$10 Per Square Foot SCHOOL Uses RILCO ARCHES



modern, efficient design gains national attention

The Mirabeau B. Lamar Junior High School in Laredo, Texas, is unusual in several respects. It was built at the amazing low cost of only $10 per square foot. It incorporated several new design features which have attracted national attention. Using one of the most economical forms of Rilco Laminated Wood Arches, the architects have achieved an unusually interesting, attractive and practical result.

Architects Caudill, Rowlett, Scott & Associates, Bryan, Texas, and A. A. Leyendecker (Associate Architect, Laredo, Texas) are to be complimented on their fresh approach to the ever-present problem . . . low-cost building for maximum efficiency and attractiveness.

The Rilco Glued Laminated Wood Arches used in the construction of the combination auditorium and gymnasium of the school helped keep costs down because of: 1) low original cost; 2) ease of erection, pre-cut and drilled for connection hardware; 3) erected with local labor and equipment.

Rilco Arches are made of selected West Coast Douglas Fir. They are manufactured with modern precision equipment under rigid factory control, and wrapped in heavy water-resistant paper for shipping.

Rilco experienced engineers will be glad to consult with you about your requirements and give "on the job" cooperation. Write now for complete information on Rilco for your jobs.

RILCO

works wonders with wood

RILCO LAMINATED PRODUCTS, INC.

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District offices: Wilkes-Barre, Pa., Ft. Wayne, Ind., Manhattan, Kan.

BARBER COLMAN

ELECTRIC

Automatic Controls

...provide individual room temperature controls for guests at BRIKCRETE MOTEL in Grand Rapids, Michigan

Designers: (for original building) Gerald Diekema, Grand Rapids, Michigan. Architect: (for addition) Alwin S. Kolm, East Lansing, Mich. Heating Contractor: Knee Heating Co., Grand Rapids, Mich.

14-room addition to Brikcrete Motel, completed in 1953. Each room has its own Barber-Colman Thermostat, permitting each guest to adjust the temperature to his needs.

Smart, modern Brikcrete Motel in Grand Rapids attracted so much traffic a fourteen-room addition became necessary. Original building shown above houses lobby, office, and eleven guest rooms, plus manager's quarters on second floor. Zone control in this building will be changed to individual room control as used in new addition (right)

Restful main lobby of this unique motel provides guests with comfortable seating arrangements, plus television. Entire motel is constructed of Brikcrete, called "the world's most modern masonry."

Color-personalized guest rooms have attractive, modern appointments, including adjustable control of heat radiated from baseboard. Mrs. Marie Degi, manager, adjusts Barber-Colman Thermostat mounted on soundproof wall.

Simplest possible type of heating control was installed in this excellent example of present-day motel design. Individual room thermostats, motor-operated valves, and a power box are combined in an electrical system which has proved highly satisfactory. As Mrs. Degi, manager, states: "The individual control of heat in each room allows our guests to select the temperature they like best. It also allows us to turn off the heat in unused rooms during our slack season. We are impressed with the efficiency of operation and hope to install Barber-Colman units in our original building." Moreover, Mrs. Degi is considering a central time clock for reducing heat supply during sleeping hours, when many windows are open.

Flexible Barber-Colman electric controls solve a wide range of heating, cooling, and ventilating problems efficiently and economically. Phone your nearest Field Office or write for expert engineering help on *your* application.

BARBER-COLMAN COMPANY, ROCKFORD, ILL., U.S.A.

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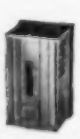
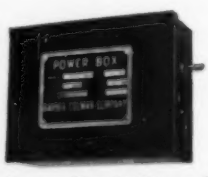
Automatic Controls • Air Distribution Products • Industrial Instruments • Aircraft Controls • Small Motors • Overdoors and Operators • Molded Products • Metal Cutting Tools • Machine Tools • Textile Machinery



Heat-anticipating Room Thermostat

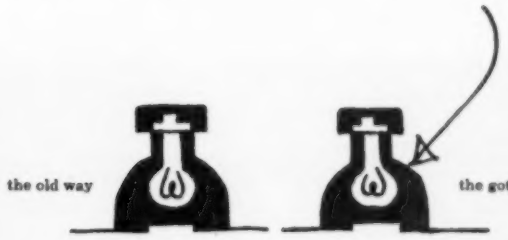
Motor-operated Valve

Power Box Cabinet



Oil-fired boiler provides hot water (two-pipe system) for heating, washing, bathing, and laundry facilities. Barber-Colman equipment illustrated provides simple, dependable, individual room comfort. Inside Power Box Cabinet are a transformer, disconnect switch, and an overload circuit breaker.

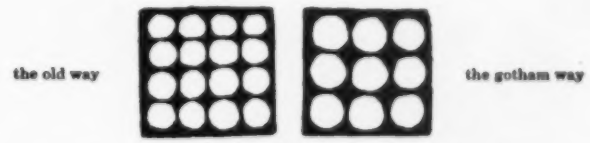
curves can make a big difference...



even in lighting... particularly the curve of the reflector in the new gotham recessed low-brightness downlite. This Alzak reflector throws the light downward in a broad cone instead of the usual narrow beam you get from other recessed downlites. The new reflector curve is optically precise; it's patent-pending.

... it delivers:

wide-angle downlighting. More illumination is spread over a wider area, without hot spots, with softer edges to the light pool than other comparable downlites can produce. Yet the light source is completely hidden and glareless from a normal viewing angle (45°). No lenses are needed, no diffusers, no louvers ... just an inconspicuous opening in the ceiling.



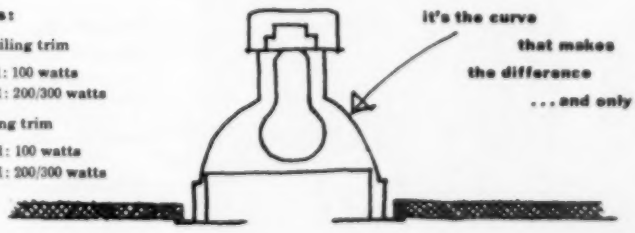
at a lower cost. Because of the wider throw, a complete ceiling of these new gotham downlites need 25% fewer units for even illumination (and 25% less upkeep) than any other recessed Alzak-reflector-type downlite.

with greater lighting efficiency. From an ordinary cheap-to-replace incandescent bulb, this new reflector directs more light down than the best competing low-brightness downlite, trapping less within the fixture itself. You actually get more footcandles from the same bulb.

available in two sizes:

surface ceiling trim
- no. 801: 100 watts
- no. 821: 200/300 watts

flush ceiling trim
- no. 811: 100 watts
- no. 831: 200/300 watts

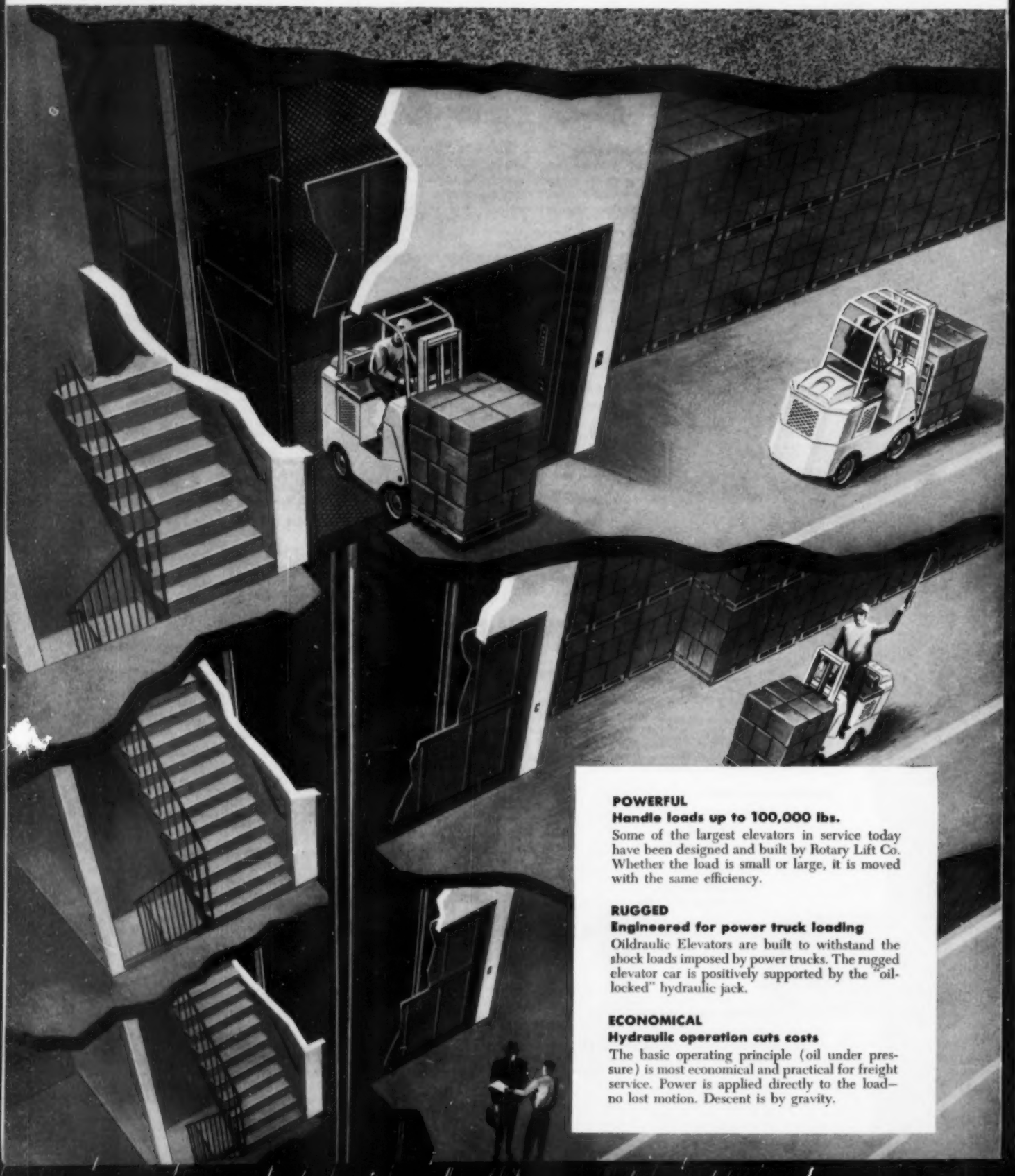


write for spec-sheets...

gotham lighting corporation

37-01 thirty-first street, long island city 1, new york

New efficiency and



POWERFUL

Handle loads up to 100,000 lbs.

Some of the largest elevators in service today have been designed and built by Rotary Lift Co. Whether the load is small or large, it is moved with the same efficiency.

RUGGED

Engineered for power truck loading

Oildraulic Elevators are built to withstand the shock loads imposed by power trucks. The rugged elevator car is positively supported by the "oil-locked" hydraulic jack.

ECONOMICAL

Hydraulic operation cuts costs

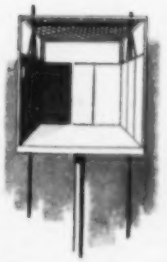
The basic operating principle (oil under pressure) is most economical and practical for freight service. Power is applied directly to the load—no lost motion. Descent is by gravity.

economy in freight elevators

Rotary Oildraulic Elevators have these architectural and operating advantages

No costly, unsightly penthouse

Because it's pushed up from below, not pulled from above, the Oildraulic Elevator requires no unsightly penthouse. This permits a saving of several hundred to thousands of dollars, and improves the design of a building.

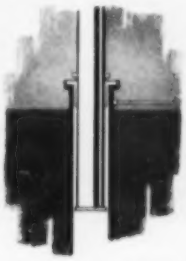


Lighter shaftway structure

There's no need for heavy, load-bearing sidewall supporting columns and footings to carry the car, counterweight, overhead machinery, and the load. Rotary's Oildraulic jack supports the entire system from below.

Flexibility in power unit location

A machine room can usually be dispensed with because Rotary's compact power unit can be located at any convenient spot on any landing and on any side of the hatchway . . . or in an area with other equipment.



Low operating and maintenance cost

As the pump, all valves and the plunger operate in oil at all times, wear is negligible. Motor is used only when car rises—half the usual service. Smooth operation reduces shock and wear. No cables to replace periodically.

New Rotary Development

PATENTED OILDRAULIC CONTROLLER
guarantees smooth starts, accurate landings

The revolutionary Rota-Flow oil-hydraulic power system gives velvet-smooth starts and cushioned stops. Oildraulic automatic floor leveling positions the elevator car to each landing with exactness . . . ¼" accuracy guaranteed. The new Oildraulic Controller is a very remarkable device that handles the functions of seven separate control valves . . . simplifies adjustments and maintenance.

Rotary electric control systems are tailored to exact requirements and any desired type of operation can be furnished. For planning assistance call on our Engineering Department.

Rotary® OILDRAULIC®

Freight Elevators

THE MODERN ELEVATOR FOR MODERN BUILDINGS

Engineered and built by Rotary, world's oldest and largest maker of oil hydraulic lifts

SEE OUR FILE IN SWEET'S—For catalog and complete architectural data, write
ROTARY LIFT CO., 1103 Kentucky, Memphis 2, Tenn.

Temperature

One of Three Modern Air Conditioned Operating Rooms pneumatically controlled by Powers Thermostats and Hygrostats. Photo above shows modern Thoracic type operating table. X-Ray Room and Research Lab, (at right) and other spaces thruout this modern nine story building also are Powers controlled.

POWERS THERMOSTATIC WATER MIXERS

Insure utmost Comfort and Safety in shower baths for doctors and nurses adjoining the operating rooms. Sitz baths and showers located throughout the building for patients also are equipped with Powers Thermostatic Water Mixers.

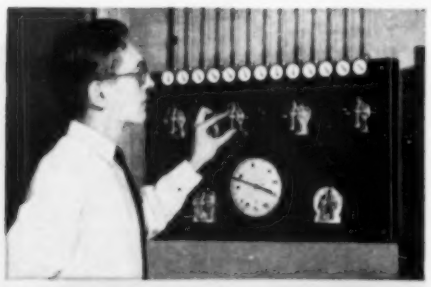
POWERS Thermostatic Water Mixer complies fully with Veterans Hospital safety requirements in Federal Specifications WW-P541a.

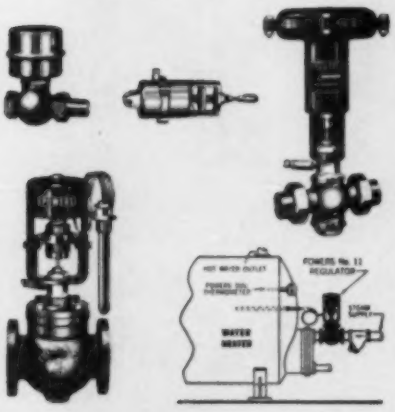
Plumbing Fixtures and Trim: AMERICAN RADIATOR & STANDARD SANITARY CORP.

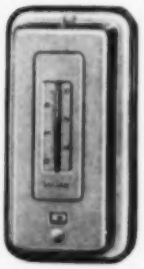
Throughout This Modern TB Sanitarium is POWERS *Controlled*

NEW CHICAGO STATE TUBERCULOSIS SANITARIUM

SUPERVISING ARCHITECT, STATE OF ILLINOIS, C. HERRICK HAMMOND • ASSOCIATE ARCHITECT, PHILIP B. MAHER
CONSULTING ENGINEER: ROBERT E. HATTIS
HEATING CONTRACTOR: ECONOMY PLUMBING & HEATING CO. • PLUMBING CONTRACTOR: M. J. CORBOY CORP.







Here is one of the nation's most colorful modern TB Sanitariums. It is equipped with the latest medical research facilities for carrying on the fight to eradicate tuberculosis.

No other firm but Powers can supply the great diversity of temperature controls now required in modern hospitals for heating, air conditioning, blood banks, hydrotherapy, shower baths, dishwashers, laundry dryers and all types of water heaters. Only a few of our complete line of controls used in the above building are shown.

Experience gained by Powers in this and many other important buildings should be valuable when you need help in selecting temperature control. Why not call in Powers on your next job?

THE POWERS REGULATOR COMPANY

SKOKIE, ILL. • OFFICES IN OVER 50 CITIES IN U.S.A., CANADA, AND MEXICO
SEE YOUR PHONE BOOK

OVER 60 YEARS OF AUTOMATIC TEMPERATURE CONTROL

(b49)

give your homes new sales appeal with

Texture One-Eleven®

EXTERIOR FIR PLYWOOD • EXT-DFPA

...the exciting new panel material that combines line and texture

ONLY GENUINE TEXTURE 1-11® GIVES YOU ALL THESE FEATURES:

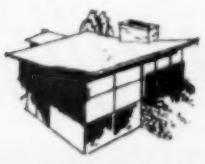
- **Shiplap edges neatly conceal vertical joints**
- **Clean-cut grooves, textured surface**
- **⅝" thickness leaves full ⅜" thick panel behind ¼" deep grooves**
- **FHA-accepted for combined siding-sheathing**
- **EXT-DFPA® trademark assures 100% waterproof glue**

LOOK FOR THIS EDGE BRAND ON THE PANEL

THE MODERN architectural trend toward using natural wood textures in dramatic small-scale patterns clearly predicts a great and growing demand for Texture One-Eleven.

In special "product previews" 167 of 179 architects interviewed voiced unqualified enthusiasm for this handsome new material. Builders who have used —and proved—Texture One-Eleven in demonstration homes report home buyers equally taken with its striking beauty.

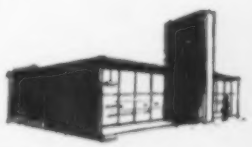
Texture One-Eleven combines high style with the economy and dependability of industry quality grade-trademarked Exterior fir plywood (EXT-DFPA®), manufactured with 100% waterproof glue. Comes packaged in 8′ and 10′ lengths in two widths and groove patterns. Get the full story from your regular supplier or write Douglas Fir Plywood Association, Tacoma 2, Washington.



. . . for striking, weatherwise exterior siding

. . . for dramatic, distinctive walls and ceilings

. . . for colorful contrasts with other materials



. . . for handsome schools and commercial buildings

®Texture One-Eleven is a registered grade-trademark of Douglas Fir Plywood Association

NOW! the new Modine

A modern room unit for cooling and heating hotels, apartments, motels, offices, hospitals, schools, homes. Ideal for new construction and modernization.

THE new Modine AIRditioner* provides cooling with chilled water, heating with hot water . . . filters, dehumidifies, circulates and introduces fresh outside air. All functions are subject to individual room control. Here is healthful summer-winter comfort for multi-room installations within reach of the most modest air conditioning budget.

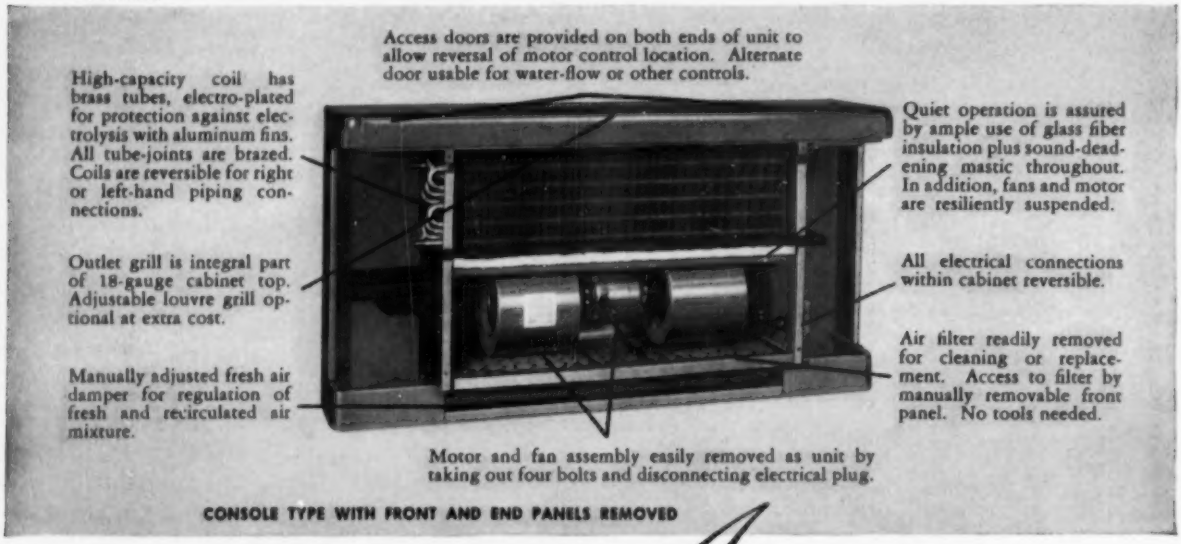
Modine AIRditioner design assures excellent performance on cooling or heating plus unusually quiet operation. Four-speed motor control provides maximum flexibility in meeting comfort requirements.

Choose from four types: The beautiful Console (illustrated) for exposed or partially recessed installation . . . the Concealed . . . and the Overhead types with and without casings. Each type is available in three sizes rated at 2/3, 1-1/2 and 2 tons of refrigeration (220, 440 and 640 cfm respectively).

Distinctive appearance and versatility are combined in the Console type styled by Jean Otis Reinecke, nationally known designer. This unit may be installed against a wall—or recessed to a depth of 5 inches, leaving less than 6 inches exposed in the room. Use of square edges at junctions of top and sides eliminates need for cutting rounded contours in wall recess . . . or preparing specially formed trim strips. Square edges blend gracefully into rounded corners in forward part of top.

Modine AIRditioners are Parker-Bonderized and finished in a semi-gloss Marine Green primer selected for high resistance to humidity. The factory finish is so attractive that further decorative treatment will frequently be unnecessary.

*Trademark

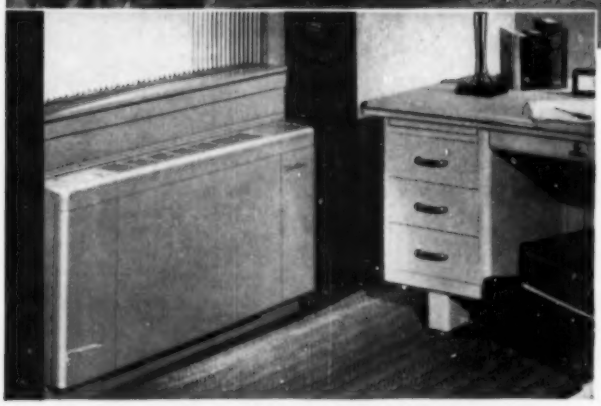

Access doors are provided on both ends of unit to allow reversal of motor control location. Alternate door usable for water-flow or other controls.
High-capacity coil has brass tubes, electro-plated for protection against electrolysis with aluminum fins. All tube-joints are brazed. Coils are reversible for right or left-hand piping connections.
Outlet grill is integral part of 18-gauge cabinet top. Adjustable louvre grill optional at extra cost.
Manually adjusted fresh air damper for regulation of fresh and recirculated air mixture.
Quiet operation is assured by ample use of glass fiber insulation plus sound-deadening mastic throughout. In addition, fans and motor are resiliently suspended.
All electrical connections within cabinet reversible.
Air filter readily removed for cleaning or replacement. Access to filter by manually removable front panel. No tools needed.
Motor and fan assembly easily removed as unit by taking out four bolts and disconnecting electrical plug.

CONSOLE TYPE WITH FRONT AND END PANELS REMOVED

Modine Airditioners

AIRditioner

(Above) Console type is installed against finished wall. A ⅜-in. thick sponge rubber strip around perimeter of back serves as wall seal and as plenum for fresh air inlet. All piping and wiring are concealed in enclosure.



(Left) Because all rear corners are square, AIRditioner can be recessed faster, at lower cost. With over-all depth less than 11 in. and up to 5 in. of recessing permissible, AIRditioner takes far less floor space.

Concealed and Overhead Types

Other AIRditioners available include: Concealed type for built-in installation behind a finished wall. Overhead type with casing for exposed ceiling installation. Overhead type without casing for use with ducts above a false ceiling or in a closet.

MODINE MANUFACTURING COMPANY
1572 DeKoven Ave., Racine, Wis.

Please send me a free copy of bulletin describing the new Modine AIRditioner.

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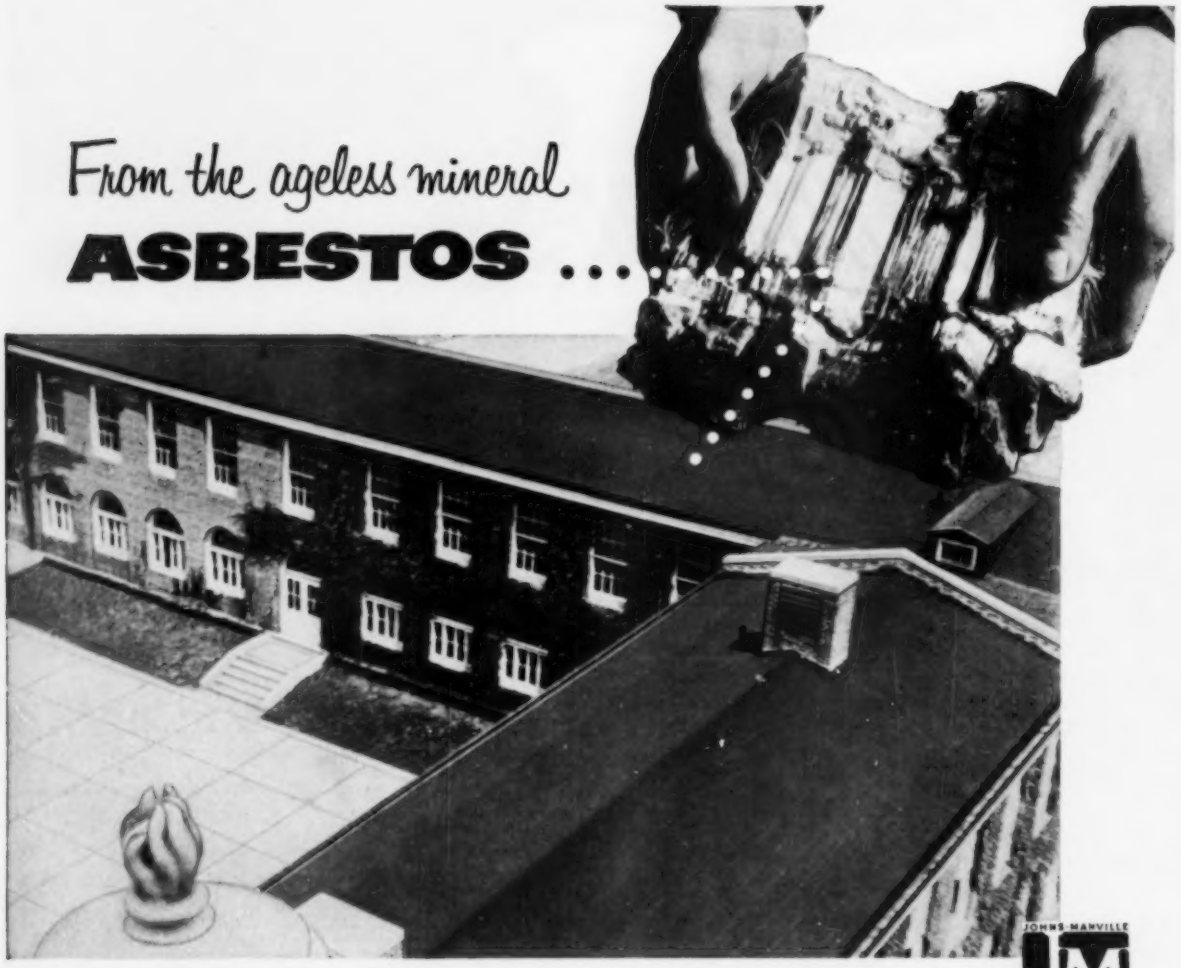
A-1223

From the ageless mineral

ASBESTOS ...



JOHNS-MANVILLE JM PRODUCTS

comes

the smooth-surfaced built-up roof- **FLEXSTONE***

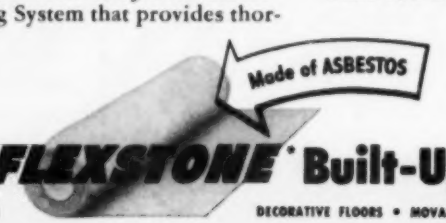
which provides a flexible covering of stone

Because they are made of the mineral, asbestos, the felts of a Johns-Manville Flexstone Built-Up Roof assure lasting service and protection. They will not support combustion. They effectively resist the drying-out action of the sun . . . won't rot, are weatherproof and need no periodic coating.

Flexstone Built-Up Roofs are smooth-surfaced . . . permit thorough drainage . . . make damage easy to locate and repair. These superior advantages are also provided by the J-M Flexstone Special Built-Up Roof . . . developed especially for dead-level decks.

For complete information about Flexstone Roofs and J-M Asbestile* Flashing System that provides thorough water tightness and effective treatment for critical roof areas, see your Approved Johns-Manville Contractor. He's listed in the Classified Section of the telephone directory. Or send for folder BU-51A. Write Johns-Manville, Box 158, New York 16, N. Y. In Canada, write 199 Bay St., Toronto 1, Ont.

*Reg. U. S. Pat. Off.



Johns-Manville FLEXSTONE* Built-Up Roofs

ASBESTOS CORRUGATED TRANSITE* • ACOUSTICAL CEILINGS

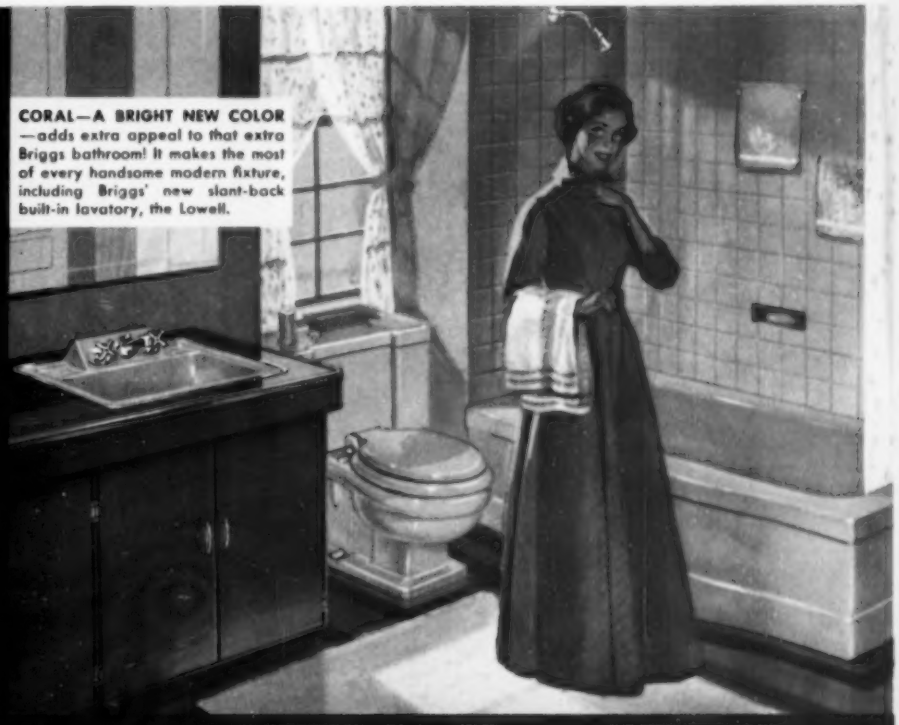
DECORATIVE FLOORS • MOVABLE WALLS • ETC.

You've seen this

BRIGGS BEAUTYWARE slogan

TWO BATHROOMS—
A MUST IN EVERY
MODERN HOME!

make it yours!



CORAL—A BRIGHT NEW COLOR—adds extra appeal to that extra Briggs bathroom! It makes the most of every handsome modern fixture, including Briggs' new slant-back built-in lavatory, the Lowell.

SELL COLOR VARIETY with Briggs Beautyware! Give your customers a change of pace with two bathrooms in *different* colors. They have a choice of Sandstone, Sky Blue, Coral or this gorgeous Sea Green.

The extra bathroom adds very little to monthly payments—yet no other feature adds so much value to a new home! It's second to none for quicker sales, bigger profits.

Folks are delighted when they see two bathrooms. They'll be even more pleased if you've specified Briggs Beautyware. These smart, modern plumbing fixtures can glamorize the entire house. Eye-appeal that lasts and lasts is a part of *every* durable Briggs fixture. Briggs Beautyware is acid-resistant, with handsome decorator colors that won't fade—even after years of hard use. You can *always* count on the high quality of popular Briggs plumbing ware.

Give home buyers the convenience of *two* bathrooms. And you'll find it's good business to equip them both with sales-making Briggs Beautyware!

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BRIGGS MANUFACTURING COMPANY • DETROIT 26, MICHIGAN

BRIGGS

"WHY?"

gives way to

"WHAT'S BEST?"

in store air conditioning!

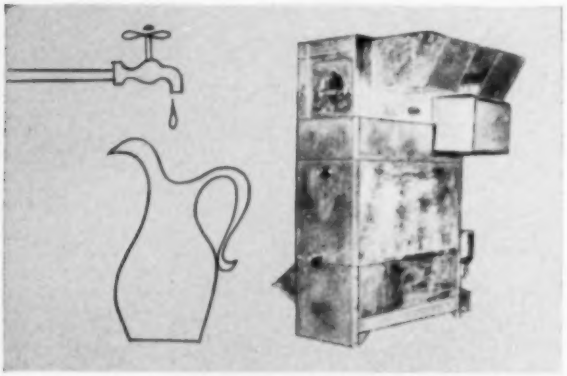
Air conditioning has become one of the largest single factors in the modernization of retail stores. The reasons are clear: It booms business. It reduces dirt and spoilage. It adds to the fresh, modern atmosphere of a store.

The big question now is "What *kind* of air conditioning?"

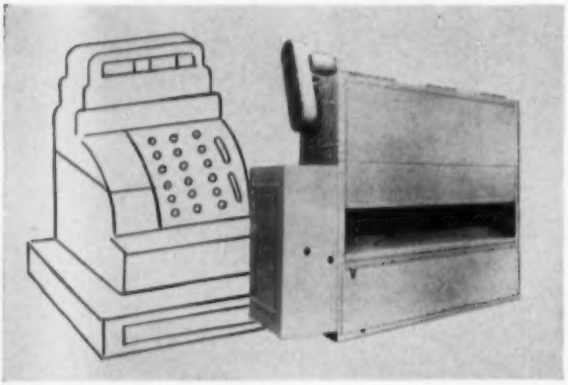
Naturally, you want to recommend units that are economical to operate, provide the best service and are built and installed by the people who know air conditioning best.

Carrier knows air conditioning, knows the requirements of retail stores and offers equipment that meets these requirements *economically*. The examples below are only a part of the complete Carrier line. For more information, consult your Carrier dealer. Or write to Carrier Corporation, Syracuse, New York.

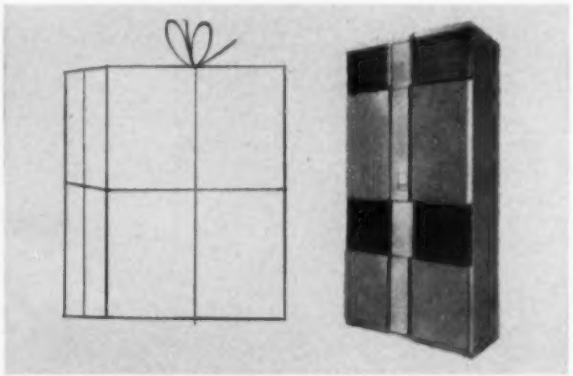
YEAR-ROUND COMFORT, YEAR-ROUND SALES. Carrier System Weathermakers are versatile and adaptable—provide cooling and heating, dehumidifying and humidifying, filtering and circulation. Installation and operating costs are surprisingly low.



WHEREVER WATER SHORTAGES PRESENT A PROBLEM, Carrier Evaporative Condensers offer the solution. They take the place of water-cooled condensers and cooling towers. Can be installed indoors or out. In capacities up to 90 tons.



EVERYTHING IN ONE PACKAGE. Carrier Commercial Weathermakers combine into one compact, self-contained unit all the elements for complete year-round air conditioning—fan, coil and condensing unit sections with optional heating coil, filter sections.



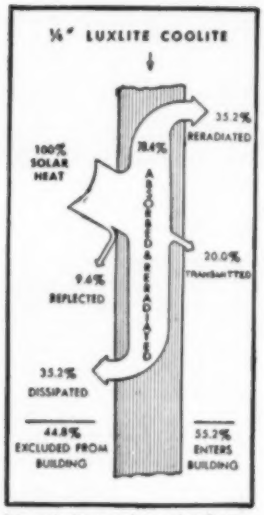
PROFITABLE AND PRESENTABLE. Carrier's packaged Weathermakers are built by craftsmen, serve their comfort from handsome, compact, easily installed units. Available in six sizes—from 2 to 15 hp. Can be used with or without ducts.

Carrier

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

Glare kills care!

COOLITE GLASS CONTROLS "RAW SUNLIGHT" ...PROTECTS PRODUCTION AND MORALE



Schematic diagram shows what Coolite does to the sun's heat. Distribution and control of light, itself, is effected primarily by Mississippi's special Glare Reducing finish.

Blinding glare reflected from any surface makes accurate work almost impossible... any task difficult. And the accompanying excess solar heat of "raw sunlight" through ordinary glass creates uncomfortable working conditions that can adversely affect output and morale.

Don't let raw sunlight flood your factory with fatigue... tiring, eye-straining illumination and energy-sapping excess heat. Coolite, the heat absorbing and glare reducing glass by Mississippi, floods work areas with copious quantities of conditioned, natural light at low cost. Coolite-controlled lighting is comfortably different, cool and clean. Workers see better... feel better, work better in plants using Coolite, the glass that helps fight eye fatigue and cuts costly mistakes.

In your plans for new industrial buildings or in modernization projects, it will pay you to find out how Coolite can increase efficiency and economy. Translucent, light diffusing, figured and wired glass by Mississippi is available from your nearby supplier in a wide variety of patterns and surface finishes, all "Visioneered" to distribute light to best advantage.

Send for free catalog, "Coolite Heat Absorbing and Glare Reducing Glass." Samples on request.

MISSISSIPPI *Glass* COMPANY

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see our catalog in ARCHITECTURAL FILE or write for copy

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

CHECK THE LOW, LOW COST OF THE NEW FLEXIVIEW

Now, Andersen brings you even lower over-all cost per square foot with the new Flexiview . . . low cost brought about through a fixed opening's savings on screen and hardware. Glazed with Andersen Double Insulating Glass, it offers an economical solution to the double glazing problem.

Flexiview units combine with either fixed or ventilating Flexivent windows to form WINDOWALLS in endless variety. They make possible the picture window combinations that complete the versatile Flexivent line.

The Flexivent line, already a builder favorite for its low installation cost coupled with high quality, is now even more versatile, an even greater window value!

Write for Detail Catalog or Tracing Detail File, or see Sweet's files for specification data. WINDOWALLS sold by established millwork dealers throughout the United States including the West Coast.

Andersen Corporation

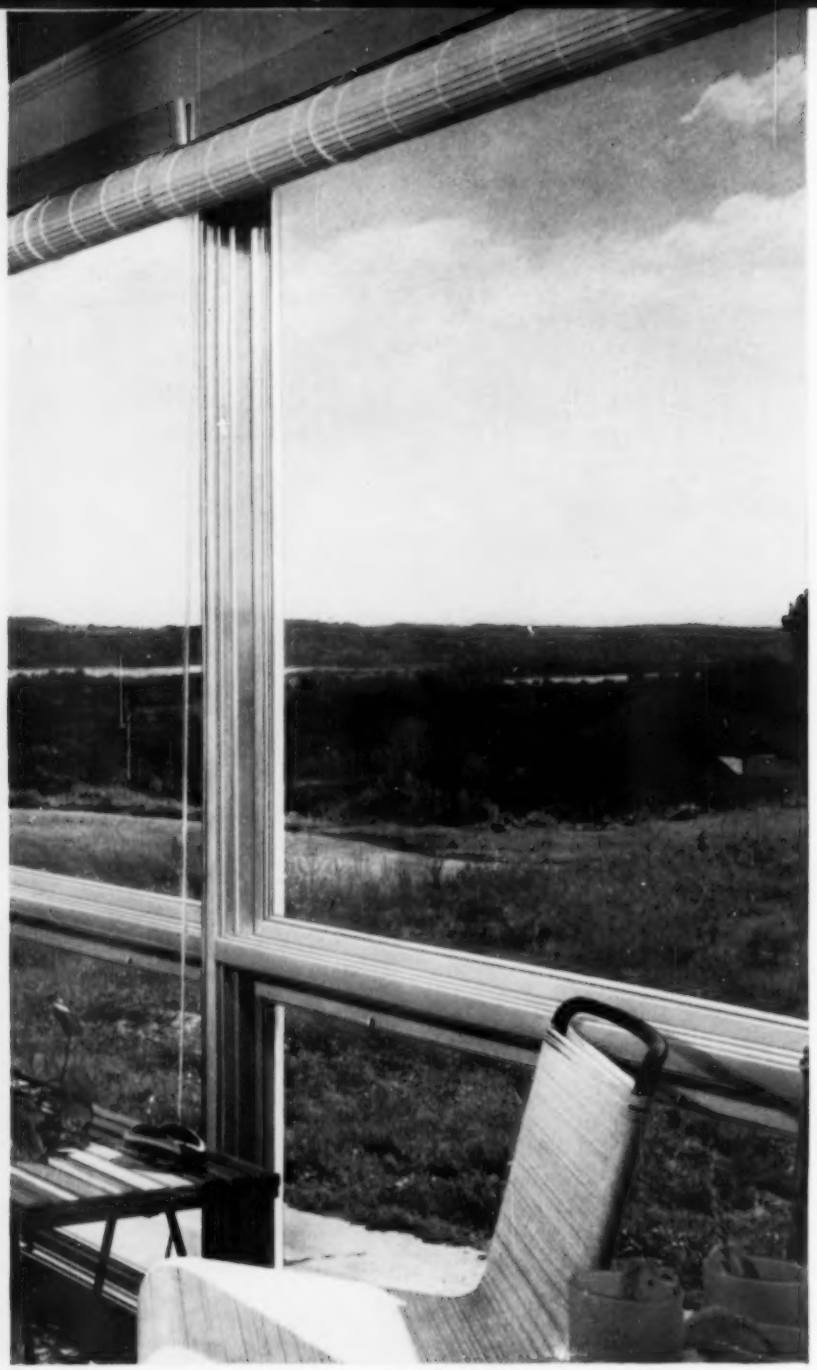
ANNOUNCES 2 PRODUCT IMPROVEMENTS FOR THE VERSATILE *FLEXIVENT* WINDOW

The new FLEXIVIEW window

PICTURE WINDOW PARTNER TO THE *FLEXIVENT*

Roto Lock Operator

NEW UNDERSCREEN OPERATOR FOR THE *FLEXIVENT*



ROTO LOCK OPERATOR

The new Andersen Roto Lock Underscreen Operator is designed for use with awning or casement installation. The centrally located roto-gear, dual-arm operator provides positive control, tight corner closing, self locking. Can be easily installed on existing Flexivents. Special pine stop furnished with each operator. Special screen available in aluminum frame only.

Andersen Corporation BAYPORT, MINNESOTA

FLEXIBL

BUILDERS HAIL *FLEXIVE*
FOR ECONOMY, FLEXIBILI

"Flexivents are without a doubt m
ular than any other window we hav
says William Pearce, executive vi
dent of Pearce & Pearce Co., bu
Green Acres Village near Buffalo, N
workmen install group of Flexi
Green Acres home.

"With Flexivents we can provid
more window area at no extra co
William Coffman, president of W. D.
Co., builders of 175-unit Prairie V
suburban Minneapolis, Minn. Pictu
effective use of Flexivents in
Prairie Village home.

"No better window for an asse
than Flexivent due to ease and eco
assembly and installation," says
Kornreich, president of Chestnut H
ing Corp., builders of 450 home
Hill Estates (above) near Newark, D

Andersen Windows*

*TRADEMARK OF

COMPLETE **WOOD** WINDOW UNITS

EXIBLE IS THE WORD FOR *FLEXIVENT*

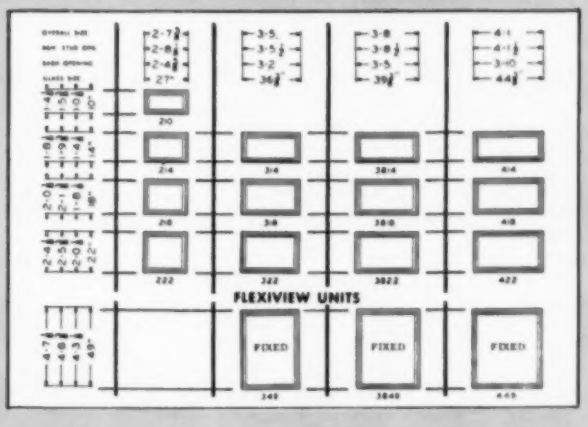
...IL *FLEXIVENT*
...Y, FLEXIBILITY!

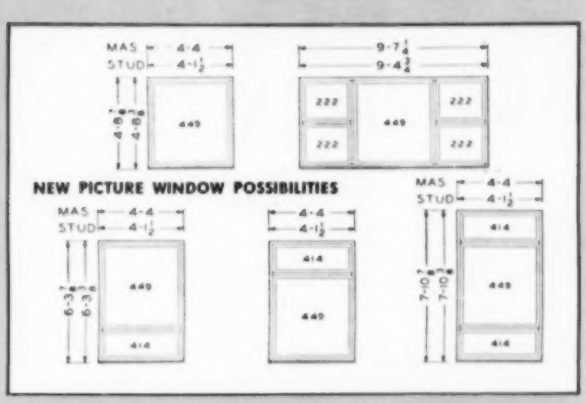
...re without a doubt more pop-...other window we have used," ...Pearce, executive vice-presi-...ce & Pearce Co., builders of ...Village near Buffalo, N.Y. Here ...stall group of Flexivents in ...home.

...ents we can provide much ...area at no extra cost," says ...an, president of W. D. Coffman ...of 175-unit Prairie Village in ...neapolis, Minn. Picture shows ...e of Flexivents in finished ...e home.

...window for an assembly job ...t due to ease and economy of ...l installation," says Stephen ...esident of Chestnut Hill Build-...iders of 450 home Chestnut ...bove) near Newark, Delaware.

NEW TABLES OF SIZES SHOW BIG SELECTIONS AVAILABLE





Anderson Welded Insulating Glass optional for all Flexivent and Flexiview windows!

Insulating Glass ends handling and washing of storm sash, gives homeowner insulation of double glazing year 'round. Coefficient of heat transmission is .675 BTU under standard conditions compared to 1.13 for single glass.

3 SASH OPERATIONS FROM JUST ONE UNIT!

HOPPER POSITION. Sash swing inward. Extremely easy to clean—easy to operate. Provides better control of ventilation.

AWNING POSITION. Sash swing outward. Perfect protection during rain. New Roto Lock Underscreen Operator optional.

CASEMENT POSITION. Installed on end sash swing outward to provide an excellent low cost casement window.

...en
*...dowalls**
*TRADEMARK OF ANDERSEN CORPORATION

...NDOW UNITS

Easy to operate! Operation is easy and simple. Friction hardware will hold sash in any open position. In awning or casement arrangements, just swing screen inward and push sash out. In hopper position, just pull the sash inward.

New Snap Lock available for Flexivents. Specially made for use with hopper vent units installed as transom or clerestory windows, or in any other close-to-ceiling locations. New Snap Type Sash Lock can be easily operated with any standard make window pull.

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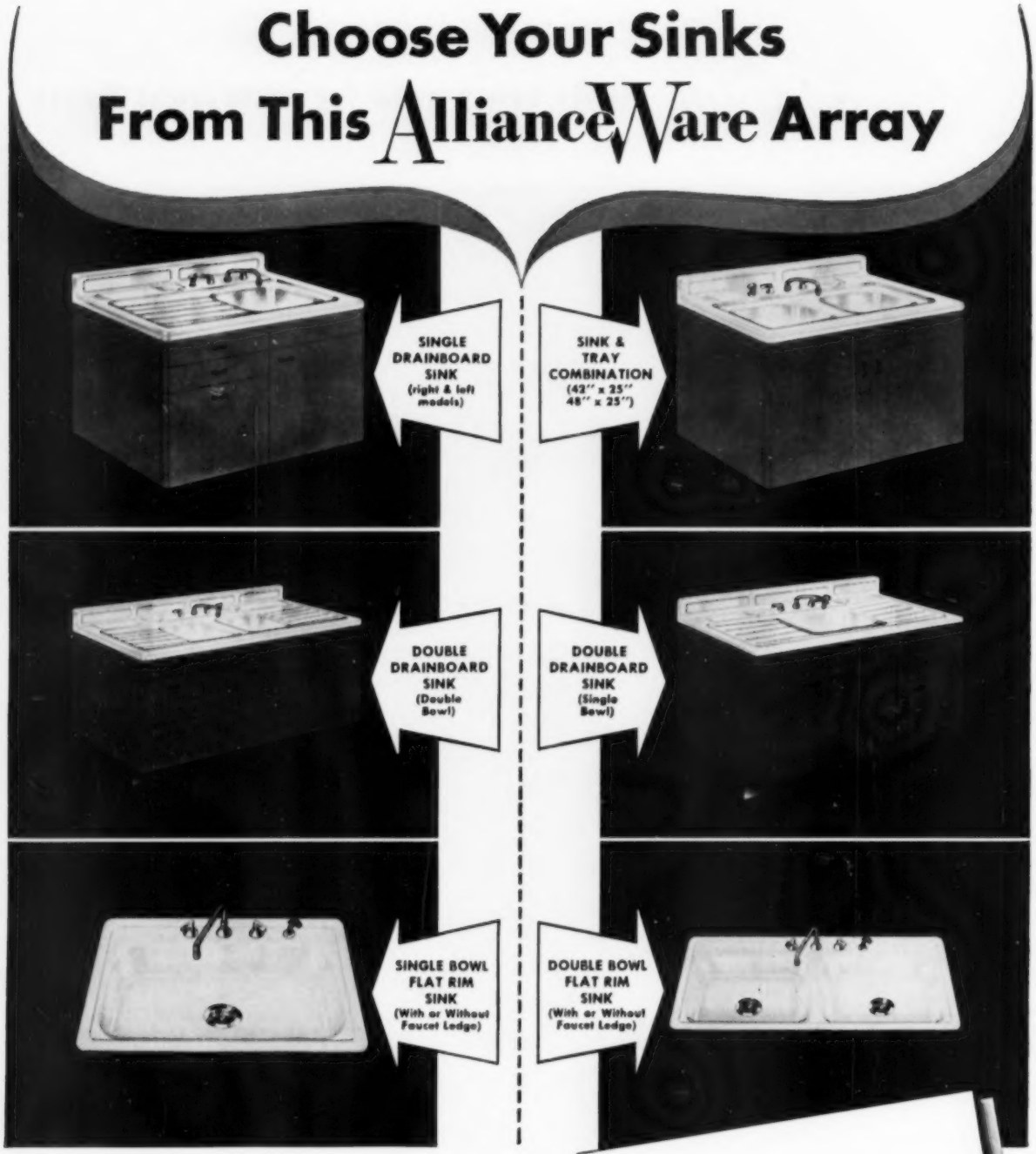
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SINK & TRAY COMBINATION (42" x 25" 48" x 25")
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Big switchboard dimming...blending...brightening
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Company .....

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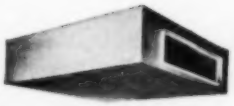
FLOOR TYPE
For free standing mounting beneath windows or along walls.



CEILING TYPE
For suspended mountings.

BASIC TYPE
For fully recessed installations, floor mounted.

HIDEAWAY TYPE
For fully recessed installations, ceiling mounted.

644 McQuay SEASONMAKER

insure tenant satisfaction at 430 Park Avenue, New York City

644 McQuay Basic Type Seasonmaker individual room air conditioners were installed in the beautiful new 430 Park Avenue office building in New York City to satisfy the demand for individual room comfort and control. The Seasonmaker's quiet operation and attractive design make it a welcome addition to any multi-room building.

The Seasonmaker's year 'round performance actually "makes the seasons come to you" . . . providing heated, and filtered air in winter; cooled, dehumidified, and filtered air in summer.

All Seasonmaker Air Conditioning Units have the famous McQuay Ripple-Fin coil construction assuring long life and dependable service. Available in Floor Type, Ceiling Type, Basic and Hideaway Types as illustrated above. For use with central systems circulating chilled or hot water or Freon. Easy to install and maintain in old buildings as well as new. Write for Condensed Bulletin 703. Representatives in principal cities.

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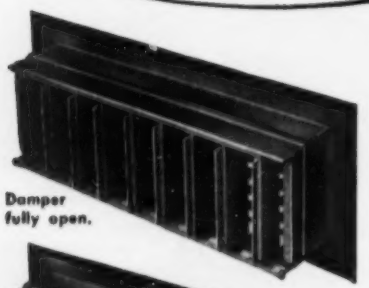
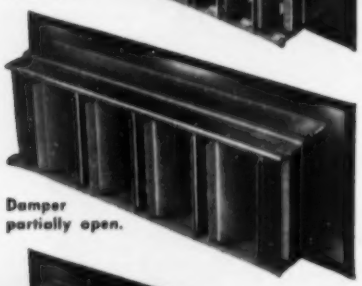
Opposed Blade Dampers

Showing TRI-FLEX T-647 Double Deflection Register with Opposed Blade Damper

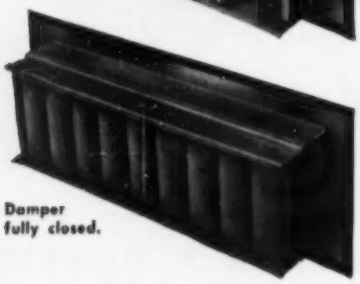
KEY OPERATOR FOR OPPOSED BLADE DAMPER
Blades are regulated by key operater which may be removed or tapped permanently into place.



Damper fully open.



Damper partially open.



Damper fully closed.

TRI-FLEX Supply Air Registers and AEROVANE Return Air Registers — specified and installed on important air conditioning jobs — are constructed with opposed blade dampers.

This improved damper unit insures uniform distribution of air over the entire face of the register . . . and provides positive damper setting in any position from fully open to fully closed regardless of system pressure. Set in a rigid steel frame, blades are formed for extra strength and stiffness, and overlap when closed, eliminating any possibility of air leakage. Blades are regulated through the face of the register by means of a key operator which may be removed or tapped permanently into place.

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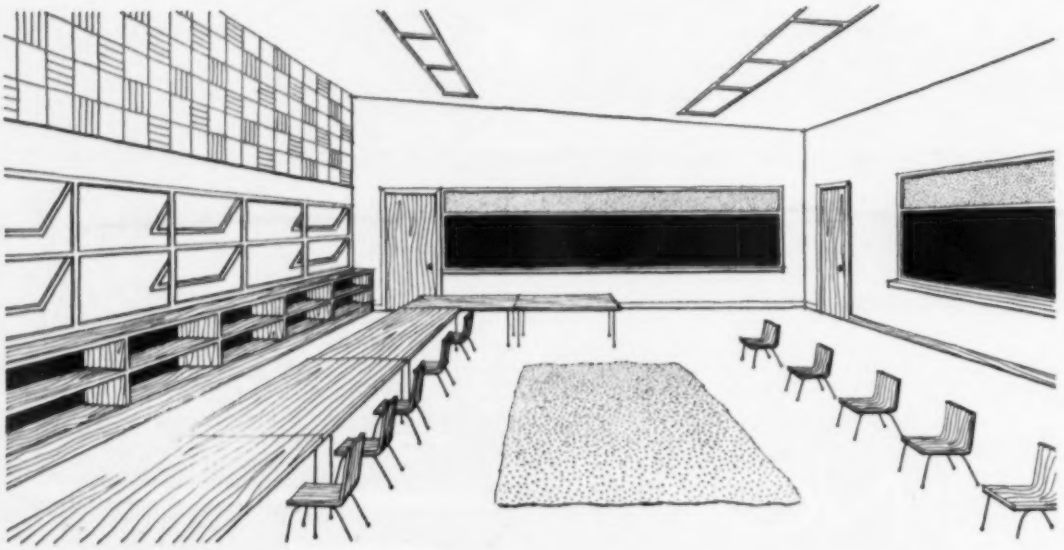

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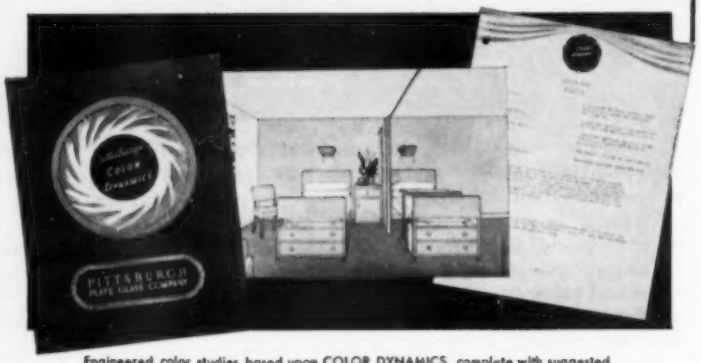
By Adding an Engineered Color Study!



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BUILT-IN MUSIC *in your plans*

Your clients for new or remodeled homes . . . offices and industrial plants . . . hospitals and hotels will be quick to appreciate plans that include Seeburg Select-O-Matic "200" Custom Units.

This remarkable instrument holds 100 records, plays 200 selections of 45 r.p.m. music . . . automatically plays a single record . . . 5 records or for as long as 25 hours without repetition . . . all at the touch of a finger . . . without touching records or handling albums. It may be installed to play through a radio or TV set, an existing sound system or be the centerpiece of the finest type high fidelity system.

Architects everywhere are finding Seeburg Select-O-Matic "200" Music Systems worthy of investigation. We think you will, too. Write for descriptive folder and the name of your Seeburg Dealer.

The Custom Unit. Mounted on dual metal track for neat, compact installation. High fidelity pre-amplifier. Spring tension magnetic pickup with genuine diamond styluses. Also available as the *Library Unit* in attractive limed oak cabinet.

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The complete Seeburg line includes high fidelity amplifiers, high fidelity speakers, program timer, paging service and remote volume control unit.

Seeburg Select-o-matic 200 *MUSIC SYSTEMS*

J. P. SEEBURG CORPORATION
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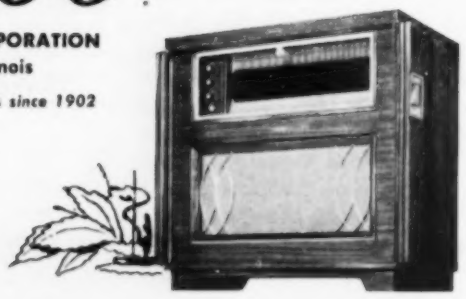
dependable music systems since 1902



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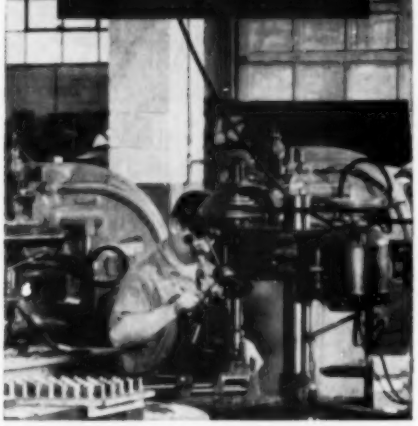
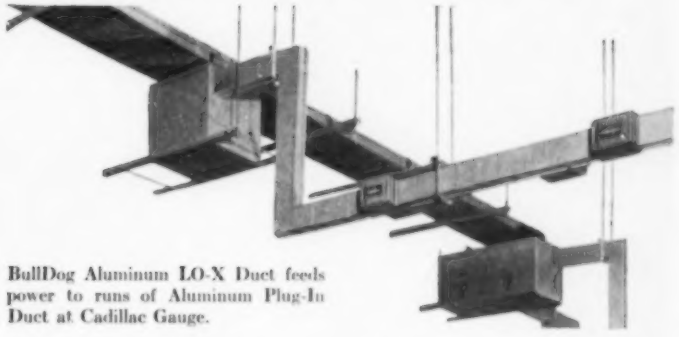
The Console. High fidelity, 20-watt power amplifier (20 to 30,000 cps range), high fidelity pre-amplifier, high fidelity dual coaxial speaker. Spring tension magnetic pickup with genuine diamond styluses. Beautiful light Korina or rich mahogany cabinet.

Aluminum Bus Duct installation at the new, completely modern plant of Cadillac Gauge Company, Detroit. This job is typical of hundreds across the nation where plants are saving money by specifying BullDog Aluminum BUStribution Duct.



BULLDOG ALUMINUM BUStribution® DUCT



BullDog Aluminum LO-X Duct feeds power to runs of Aluminum Plug-In Duct at Cadillac Gauge.

Everything* you expect in bus duct!

***PERFORMANCE:** If you're looking for safe, efficient, low cost electrical distribution, check into BullDog BUStribution Duct with aluminum bus bars. Seven years of exhaustive research and hundreds of actual installations prove that aluminum bus duct will provide trouble-free, economical, and efficient performance. Aluminum is no experiment or substitute — it is here to stay. Aluminum bus duct is listed by Underwriters' Laboratories, Inc., and carries the same guarantee as BullDog's other systems.

***INSTALLATION:** Runs of aluminum bus duct can result in a considerable weight savings. This light weight, plus BullDog's patented scarf-lap joint, makes installation simpler, faster, more economical. Like all BullDog BUStribution Duct Systems, aluminum bus duct is completely reusable. It is completely interchangeable with other BullDog Duct Systems, plugs and accessories.

***ECONOMY:** Because you save in the original purchase price, in installation and operation costs, BullDog aluminum bus duct brings you the lowest possible current-carrying cost per ampere per foot.

Get complete information on Aluminum LO-X Duct (for feeder and welder circuits) and Aluminum Plug-In Duct (for branch circuits). Consult your local BullDog Field Engineer, or write BullDog Electric Products Company, Dept. PA-54, Detroit 32, Michigan. ©BEPCO

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For fast, sure welding

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●This man is position-welding an expansion joint in a steam line. Only good steel pipe like Youngstown takes this type of weld easily. That's because top-grade steel bonds better and faster. Depend on Youngstown and you're hours of labor ahead.

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Four Features a Fixture-Bare Floor* gives your client

...features that cannot be obtained in any other way!

THE TOLL OF YEARS RESTS LIGHTLY ON FIXTURE-BARE FLOORS BECAUSE THERE ARE NO HOLES THROUGH FLOOR AND NO OBSTRUCTIONS AROUND WHICH VERMIN CAN ACCUMULATE

★ **REDUCTION OF WASHROOM MAINTENANCE COST TO AN ALL-TIME LOW**

★ **INSURANCE AGAINST UNTIMELY OBSOLESCENCE**

★ **MAINTENANCE OF CLEANLINESS AT AN ALL-TIME HIGH**

★ **MAJOR SAVINGS IN THE OVER-ALL COST OF BUILDING**

● Off-the-floor wall-type plumbing fixtures installed with a Zurn System effect many substantial savings in construction costs; permit the use of any type floor construction and any type of wall construction; permit reduction in height of ceiling; eliminate need of furring-in drainage lines; eliminate caulking to floor; simplify drainage and vent piping layout; give greater flexibility for planning washrooms—and unrestricted opportunity to exercise your imagination, skill and ingenuity in a way that will win both owner and user approval for this all important convenience facility—the washroom.

WRITE FOR FREE BOOKLET entitled, "You Can Build It and Maintain It for Less, A NEW WAY". It presents new ideas for washroom installations in new and existing buildings.

Over 700,000 wall-type plumbing fixtures installed with the Zurn System in buildings of every type from coast to coast. Your Zurn Representative has list of buildings which have washrooms with fixture-bare floors.
*T. M. Reg. U. S. Pat. Off.

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PLUMBING DIVISION

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FIXTURE-BARE FLOORS* *are obtained by installing* **WALL-TYPE PLUMBING FIXTURES** *with the*

ZURN system*

A Zurn System is available for installing all types and makes of wall-type plumbing fixtures.

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Please send me the booklet, "You Can Build It and Maintain It for Less, A NEW WAY".

Name and Title .....

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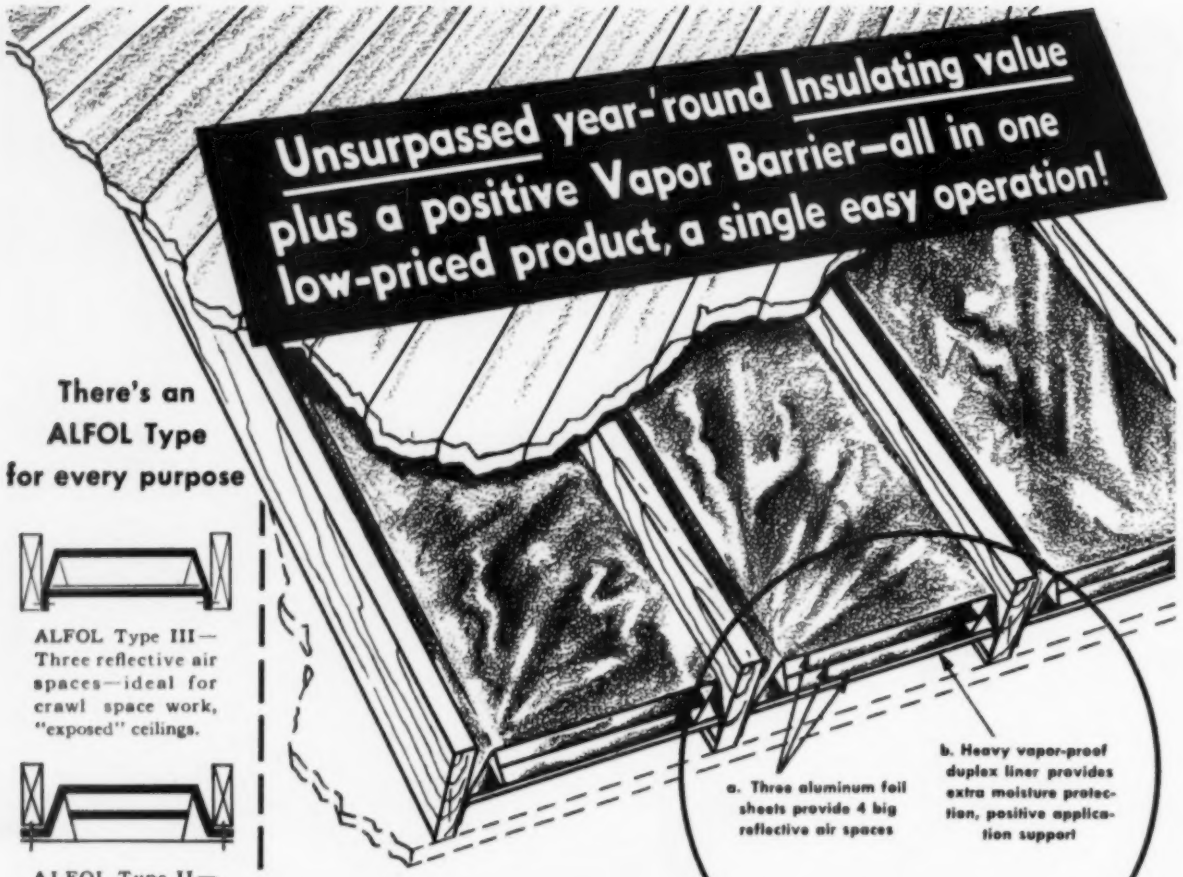
Please attach coupon to your business letterhead. Dept. PA-688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plus a positive Vapor Barrier—all in one
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a. Three aluminum foil sheets provide 4 big reflective air spaces
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BUILDING BLANKET INSULATION

Here's top insulation value in America's cleanest, most compact "package"—ALFOL Type IV! Design is simple: 3 aluminum foil sheets automatically expanding to create 4 reflective air spaces. Yet as applied above, for example, the year-round value of Type IV surpasses that of full-thick bulk insulation! (Basis: ASHVE calculations.)

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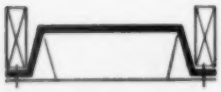
Application is rapid, positive, fool-proof . . . because the aluminum foil sheets space themselves automatically. And ALFOL usually costs less to buy, less to apply. More good reasons why more and more architects are using the entire ALFOL line to "pin-point" their insulation specifications.

There's an ALFOL Type for every purpose

ALFOL Type III—Three reflective air spaces—ideal for crawl space work, "exposed" ceilings.

ALFOL Type II—Three reflective air spaces—designed to be applied across stud *faces*.



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Write for free literature, complete details —Address letterhead to our Dept. PA-3

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Made for each other . . .

MODERN HOUSES AND UALCO ALUMINUM AWNING WINDOWS ➡

Ualco
U-AL-CO

These two go together in perfect architectural harmony, both making the most of the modern concept of simple, functional design.

These two go together in performance as well as appearance, too. Modern houses, built for maximum efficiency, can ask no greater window efficiency than the Ualco Aluminum Awning Window with its 100% or controlled ventilation and its strip-proof cam lock operator which eliminates separate locking devices; unlocks, opens and locks in any position to over 90 degrees—with one finger-tip operation.

No wonder many architects prefer Ualco Aluminum Awning Windows in the houses they design!

Ask About Ualco's Engineering Planning Service — specifically designed to assist architects, engineers and contractors in making "take-offs" and solving their window problems.

See UALCO'S Catalog in Sweet's $\frac{16a}{Un}$ or write for complete information.

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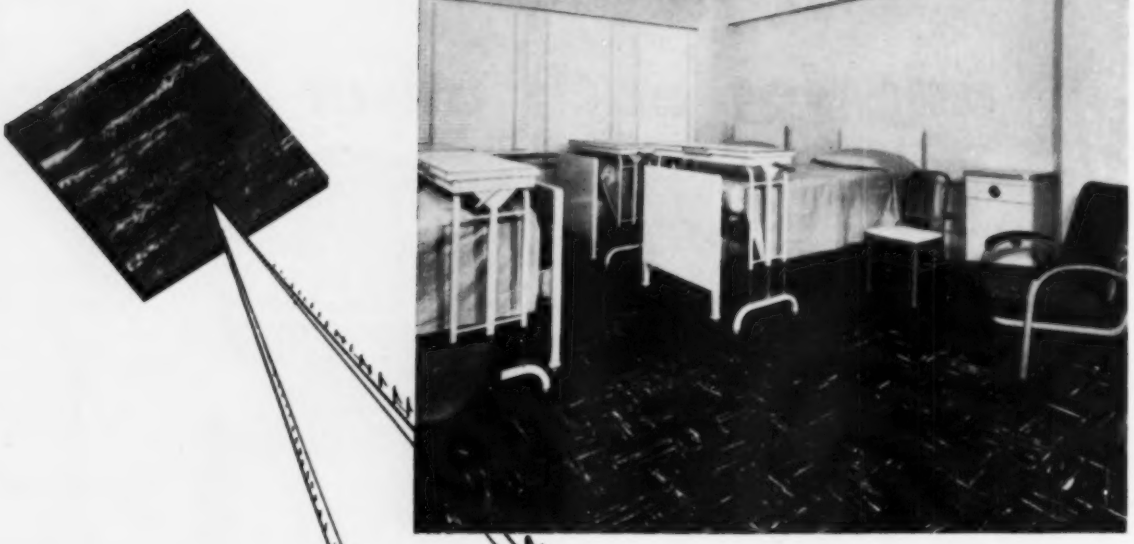
WORLD'S LARGEST MANUFACTURER OF ALUMINUM WINDOWS



ARCHITECTS! HERE'S AN INDOOR HIGHWAY WITH MORE MILEAGE PER DOLLAR

Architects are specifying HAKO FLOOR TILE (reinforced with plastic) for use in hospital rooms and corridors . . . where quietness underfoot, modern traffic-lane design and cheerful beauty is demanded. This durable floor tile with its low initial cost, safety underfoot and ease of maintenance . . . plus its toughness and longtime wearing qualities, meets the requirements for hospital floors. Where traffic areas are continuously exposed to the severest kind of treatment, HAKO ASPHALT TILE assures more mileage per dollar. Architects rely on the dependability of HAKO Asphalt Grease-Proof Tile Flooring to give complete satisfaction on floor areas that need this added protection.

Send for our beautiful new full color descriptive brochures on HAKO Vinylflex Plastic Floor Tile, HAKO Asphalt Tile Flooring, and CORONET Plastic Wall Tile.

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Wainscot of Stark's Ocular Green brightens the school cafeteria, helps cleanliness.

Time-proved ...

GLAZED FACING TILE *protects hard-working interiors at New York's P.S. 112*

Stark's Clear Glaze is used in P.S. 112 gymnasium to aid light reflection, reduce maintenance.

For this 1,200 pupil New York City elementary school, Architects Eggers & Higgins specified Stark Glazed Facing Tile where wear and tear are heaviest—in corridors, gym and cafeteria.

This rugged, pre-finished material combines economy, good looks, and lifetime durability. It simplifies construction by building wall and finish with a single unit.

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Its tough ceramic surface can't be marked or stained by normal school usage, washes easily, never needs refinishing.

Best of all, you can *count* on Stark Glazed Facing Tile—it's been proved in thousands of fine buildings erected over the past 40 years.

FREE BROCHURE on Modular Masonry will help you use Stark Glazed Facing Tile to best advantage. Address your request to Dept. PA-5.

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ALL DOWN THE HOLLOW METAL LINE

. . . from doors to door frames to case work to partitions!

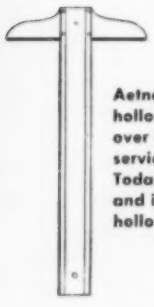
CONEY ISLAND NEW GENERAL HOSPITAL
Architect: Andrew J. Thomas — Associate Architects: Katz, Waisman, Blumenkranz, Stein, Weber — Department of Public Works, New York City: Albert Bauer, Sr., Architect of Hospitals; Alexander Beresniakoff, Architect in Charge — General Contractors: Gerace and Castagna

The CONEY ISLAND NEW GENERAL HOSPITAL is a good example of what AETNA and its divisions can do for a building, hollow-metal wise. For this project:

Aetna Steel Products Corporation is supplying all hollow metal doors and door frames;

Arnot-Jamestown, division of Aetna Steel, is supplying all laboratory and general hospital case work and counters;

E. J. Boyle, division of Aetna Steel, is supplying AETNAWALL office partitions throughout.



Aetna versatility and leadership in hollow metal has developed over a period of 51 years of service to the building supply field. Today, you can look to AETNA and its divisions for ALL your hollow metal needs.

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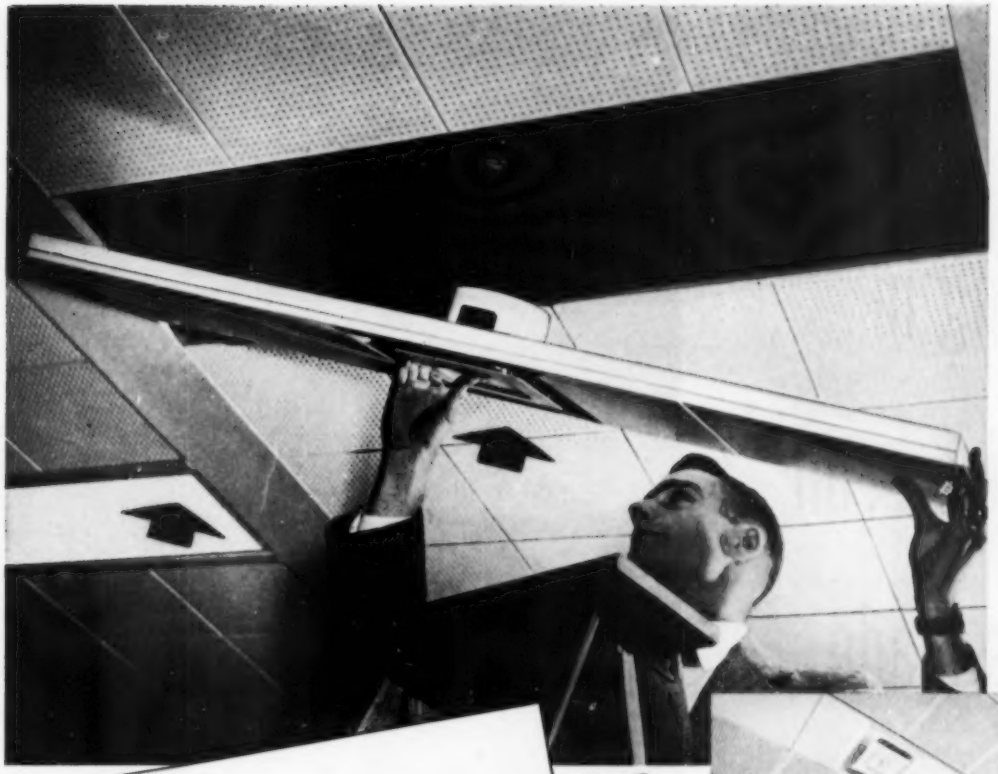
WORLD'S LARGEST MANUFACTURER OF HOLLOW METAL PRODUCTS

PRODUCERS OF: The new Arnot Partition-ettes; Arnot Functional Office Furniture; Hospital and Laboratory Equipment; Under-Counter Bank Equipment; Aetna Steel Doors and Frames; Kahr Bearings; Boyle Metal Office Partitions (Aetnawall).



Announcing kno·draft

panel type air diffusers

ACTUALLY PART of the ceiling, Kno-Draft Panel Type Air Diffusers fit precisely into the acoustical tile pattern, creating a unified "dead level" surface that is pleasing to the eye.

FLEXIBLE TUBING connects Kno-Draft Panels to ducts, permits wide latitude in installation. Panels may be moved as necessary without affecting efficiency or requiring change in ductwork.

ESPECIALLY DESIGNED for acoustical suspended ceilings, Kno-Draft Panel Type Air Diffusers can be installed as fast and easily as the acoustical tiles themselves—a matter of minutes. Ducts and tubing connections are readily accessible.

Furthermore, Kno-Draft Panels do not have to be lined up with ducts. They can be placed anywhere on the ceiling—are connected to ducts by special patented flexible tubing. This allows great flexibility and permits relocation of offices and partitions without moving ductwork.

Air volume through Kno-Draft Diffusers is adjustable *after* installation. Air velocities remain constant at all damper settings. Mail coupon today for full information on this new exclusive development in air diffusion. Connor Engineering Corporation, Danbury, Conn.

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Without obligation, please send your Bulletin K-36 describing the new Kno-Draft Panel Type Air Diffusers.

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Position_____

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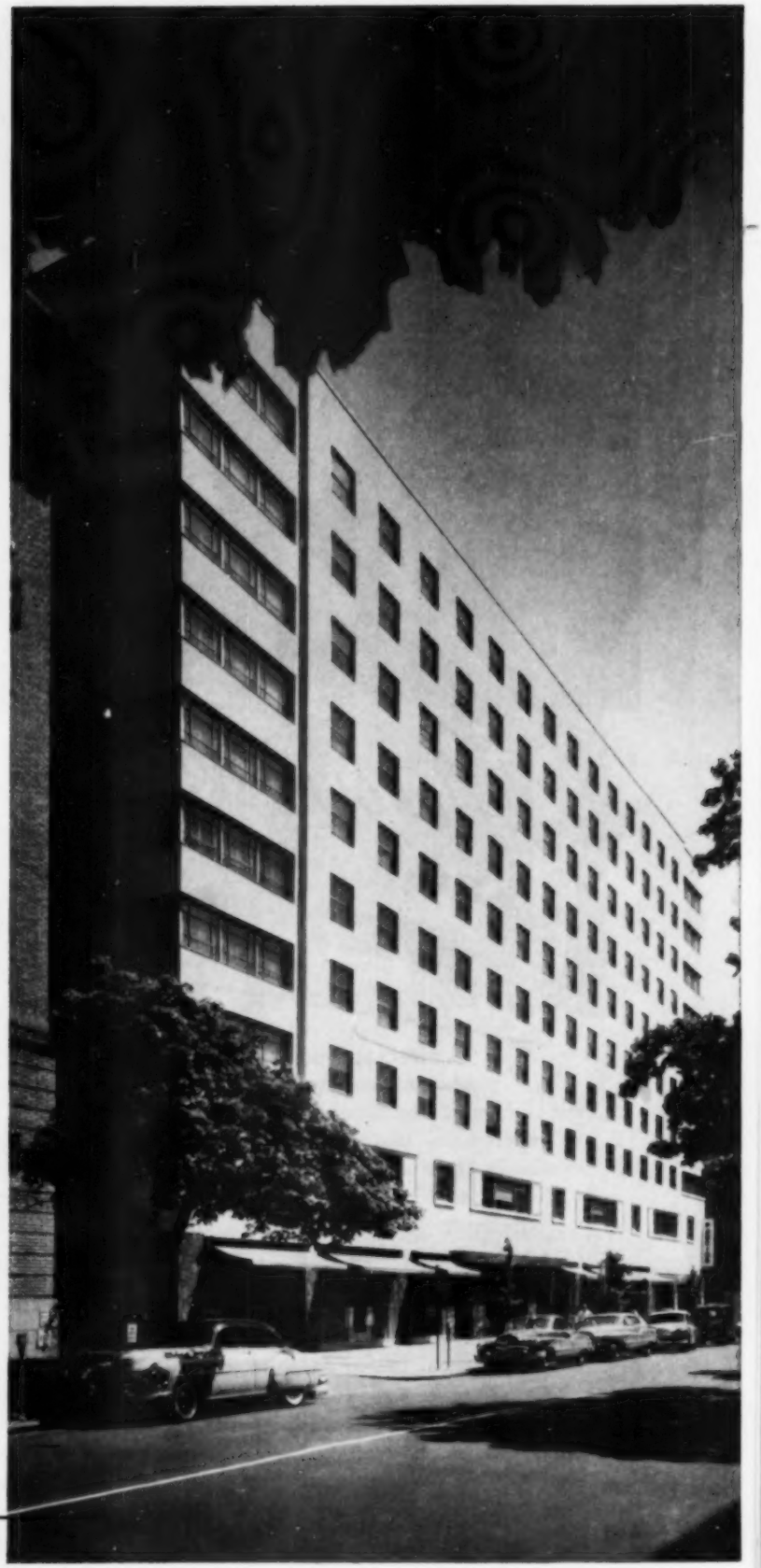
Parking in the sky... on floors made 40% lighter with Ceco-Meyer Steelform Construction...



Cafritz Building, Washington 1, D.C.
Cafritz Construction Company, builders
LeRoy L. Werner, architect
Beall & LeMay, structural engineers

Case history of CECO on-the-job performance

Planning makes entire building site income-producing. Ceco cuts dead load in floor system.

A tenant in the Cafritz Building, Washington, D.C., has no parking problems. He just drives to his floor—even if it's 10 stories up—parks, steps into the corridor—then into his office.

Morris Cafritz, building owner, has reason to be happy, too: his whole land plot produces income. When planning the building, the problem confronting him and architect LeRoy L. Werner was . . . how to eliminate areas of no income on the plot. Windowless space won't rent . . . court design means waste areas. The solution: a square building with a garage in the core, with a ramp spiraling 10 floors up. Thus layout design made all the land rent-producing. And structural design kept the floor system light and economical. This was accomplished with Ceco-Meyer Steelform Concrete Joist Construction. But let architect Werner tell the story:

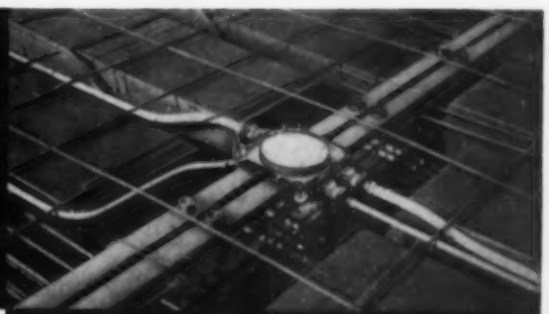
"I know of no other floor framing that would have been more suitable for this job," Mr. Werner said. "Structural engineers Beall & LeMay designed panels of the building for various types of concrete systems, including joists with tile filler, beam and slab construction, and flat plate construction. They found that reinforced concrete joist construction formed with Removable Steelforms offered savings in floor weight of 40% compared to flat plate construction."

When you plan your next project call Ceco product specialists. They will help you save through product engineering. Consult Sweet's File for address. CECO

Ceco-Meyer Steelform construction saves steel, concrete, lumber and labor

Steelforms are quickly installed on simple open wood centering. In most areas, Ceco's own erection crews are available for placing and removing the centering and forms. Cost is reduced because the same lumber and steelforms are re-used from floor to floor.

Fastest-to-erect and most economical electrified floor system



Ceco-Meyer Steelform Construction permits placement of underfloor ducts for electrical outlets spaced as needed for a modern office building. Note how the duct system is easily carried in the joist construction. Result: the most economical electrified floor.

Why Concrete Joist Construction Saves Material

Shaded portions show concrete eliminated by concrete joist construction.

In construction products CECO ENGINEERING *makes the big difference*

CECO STEEL PRODUCTS CORPORATION
Offices, warehouses and fabricating plants in principal cities
General Offices: 5601 West 26th Street, Chicago 50, Illinois

Check the reasons why the popular choice for summer cooling and winter heating is

the individually-controlled unit that filters and circulates the air all year 'round in central-plant, multi-room installations

. . . . . .

Architects, builders and heating contractors like the Remotaire because it's versatile, easy and economical to install, space saving.

Building owners like the Remotaire because it provides healthful, draft-free comfort conditioning all year 'round with minimum attention.

- Same simple piping circuit supplies chilled water for summer cooling, hot water for winter heating. No unwieldy ductwork needed.
- The Remotaire is adaptable to the best system for the job—Wall Aperture System, Interior Ventilation System, Well Water System, Split-coil System, Motel System, Residential System, Modernization System.
- Units can be installed recessed, partially recessed or free-standing.
- Three popular sizes to choose from—200, 400, 600 cfm. A size for every job.
- Easy to service. Every part of the assembly can be reached easily, quickly.
- Easy to maintain. Motor assembly can be taken out and replaced in less than 15 minutes.
- Reversible coil is designed for right or left hand connection. Easily reversed in the field.
- Special electrical junction box is easy to get to.
- Sturdily built . . . doesn't have to be pampered in installation. (Reinforced grille will support weight of 200 lb. man!)
- Each unit is individually controlled . . . temperature in each room can be changed without affecting adjoining space.
- The Remotaire is quiet. No whistling-jet noises.
- Handsome jacket, furnished in semi-gloss Cooltan, can be painted any color.
- Toe-step offset permits better fitting of rugs around units and eliminates marring of front when cleaning floors.
- Drain pan protection. Large pan runs entire length of unit to prevent condensation drip. Grille shield prevents foreign matter from entering through top.
- Large filters . . . keep air fresh and clean.
- Adjustable damper. Amount of air intake can be changed at any time.
- Wall seal. Rubber molding around back panel provides air seal between unit and uneven plaster.

For further information on the Remotaire see Sweet's Architectural File or contact your nearest American-Standard sales office for descriptive literature.

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On a typical factory installation lighting 20,000 square feet of floor space, for example, the Smithcraft A. L. S. Factory Lighting Unit will save roughly $8,000 over a ten-year period, when compared with a typical industrial fixture with 6-10% up-lighting (design and performance conforming with RLM standards). So, it's possible to enjoy the benefits of the finest lighting that money can buy and effect really substantial savings at the same time, simply by buying the right fixture.

Ask us to send you our A. L. S. Factory Lighting Folder.

PHOTOGRAPH SHOWS INSTALLATION OF 4450 SMITHCRAFT A. L. S. UNITS LIGHTING 397,000 SQ. FT. TO 75 FOOTCANDLES.

BUY LIGHTING — NOT FIXTURES. INVEST IN AMERICA'S FINEST FLUORESCENT LIGHTING by Smithcraft
LIGHTING DIVISION
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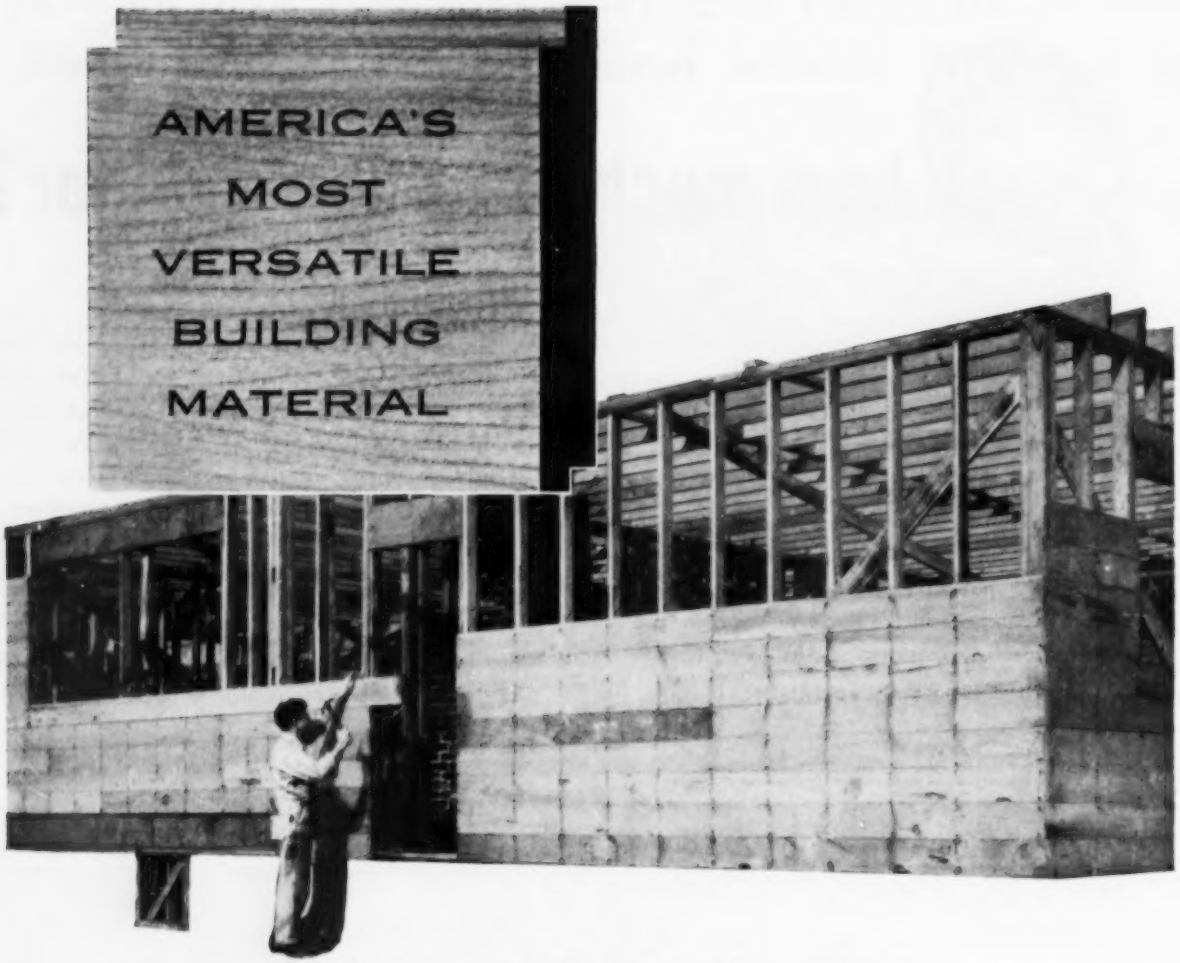

Sheathing of West Coast lumber — the building material with an outstanding record of performance — assures walls that are strong, rigid and long lasting. Lumber offers high insulating value, real nail-holding power. West Coast lumber is time-tested in conventional construction. And, as always, it remains the natural choice of the day's most creative designers.

For dependable lumber, specify the West Coast species... Douglas Fir, West Coast Hemlock, Western Red Cedar and Sitka Spruce.

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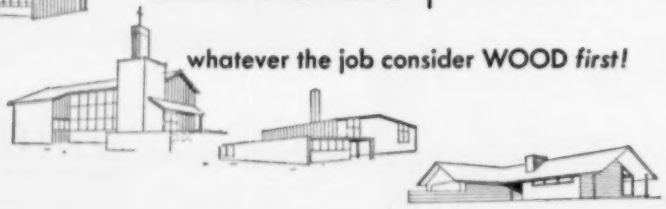
West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland 5, Ore.

WEST COAST LUMBER | **Douglas Fir • West Coast Hemlock**
Western Red Cedar • Sitka Spruce



whatever the job consider WOOD *first!*

Vibrapac Block used in creating an unusual effect in this Apartment House, located in Venezuela, South America. In this case, the architect used a floor filler block which is normally used for low-cost fire-safe floors. The interesting pattern was created by vertical stacking.

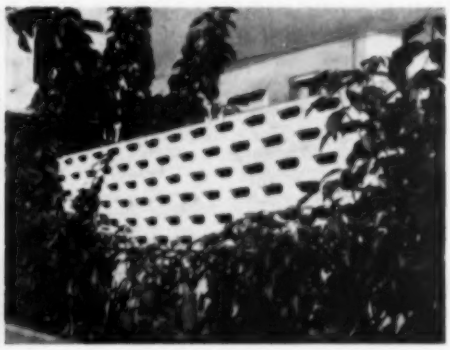
Day and night pictures of Vibrapac Block apartment house located in the east end of Caracas, Venezuela. Guinand & Benacerraf, Architects. Ramon Closa, Contractor.

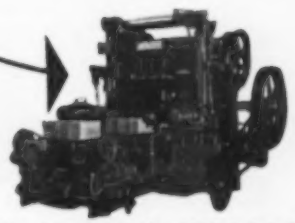
You, too, can obtain beautiful effects with Vibrapac Masonry Units

You know you get firesafety, stormsafety, built-in insulation and lifelong durability in a Vibrapac Block constructed building. In addition, you can get unusual structural beauty . . . something substantial and enduring . . . not just "looks" alone. This beauty is brought out in various ways, limited only by the imagination and skill of the designer.

Vibrapac Block . . . in the creative hands of capable architects and builders . . . have become, in effect, a new building material. Many outstanding homes, apartment houses, churches, schools and public buildings are convincing evidence of the BEAUTY and VERSATILITY of this modern building material.

These attractive garden enclosures were designed by using beam-lintel block placed on edge. Core openings then became horizontal, creating interesting sun and shadow patterns. The enclosures arrest excessive winds and provide privacy, shade and safety.





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for entrance and vestibule doors and all interior doors

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CONCEAL the closer and expose the beauty of the door.

Yes, for ALL the doors . . . heavy and light . . . from entrance to interior room doors . . . specify the unseen power that automatically controls the door closing action every inch of the way, firmly bringing the door to a quiet rest at closed position. No unsightly mechanism exposed to dangers of tampering and accidents or to gather dirt and dust.

Specify RIXSON . . . the original floor type closer . . . the "strongest of them all."

THE OSCAR C. RIXSON COMPANY

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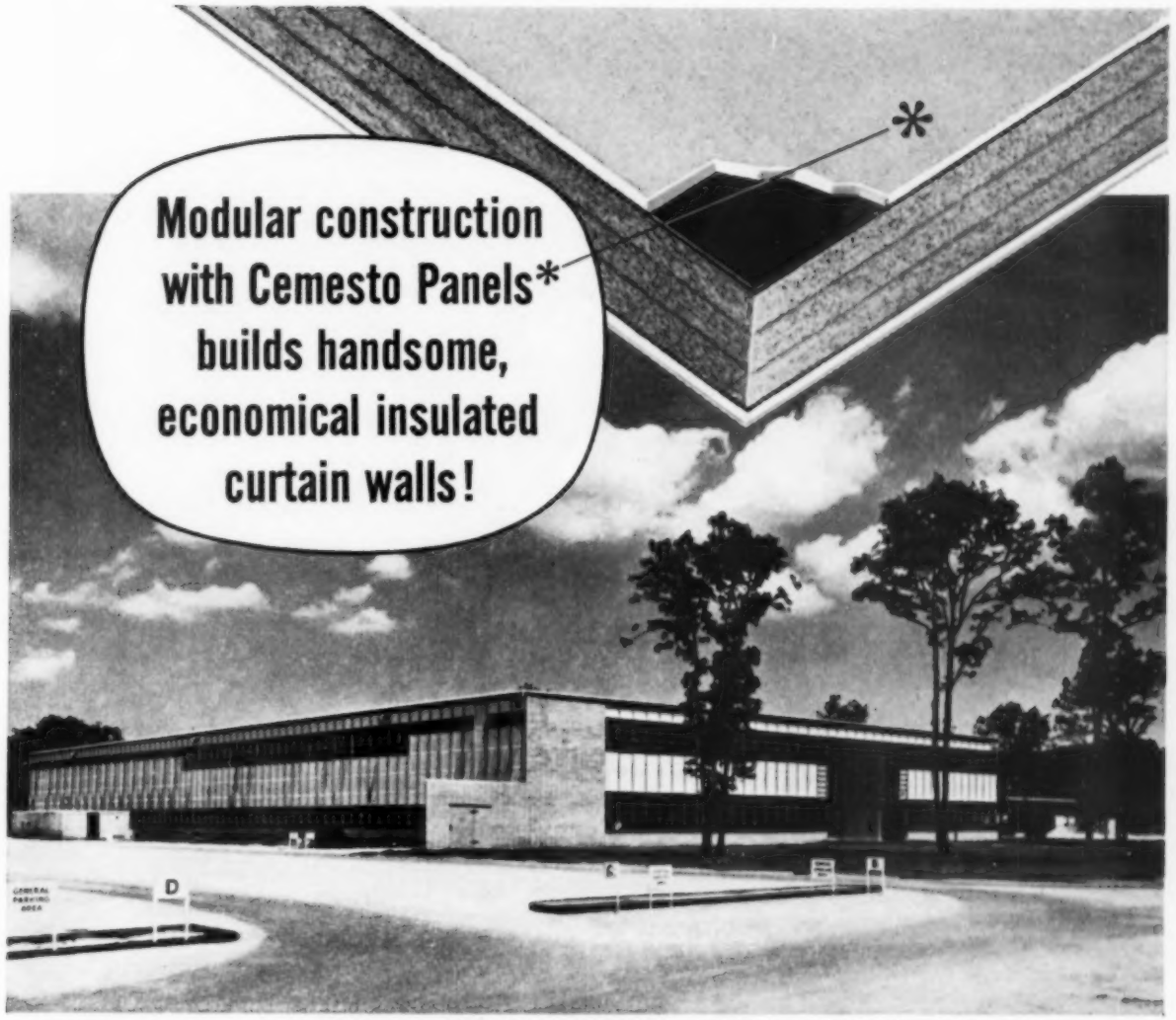

Stratos Division Plant of Fairchild Engine & Airplane Corp. at Bay Shore, L. I., N. Y., shows its handsome Cemesto Panelized exterior. Here is a unique combination of striking modular design plus functional use of panel materials.

In blending harmoniously with brick, stone, wood, glass . . . or for use as the sole curtain wall material . . . Cemesto Insulating Structural Panels combine top efficiency and performance with top economy. They simplify design, speed construction, reduce maintenance costs of all types of buildings. And result in strong, fire-resistant, insulated curtain walls with outstanding savings in time, labor, materials.

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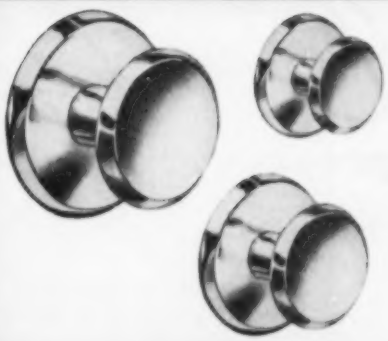

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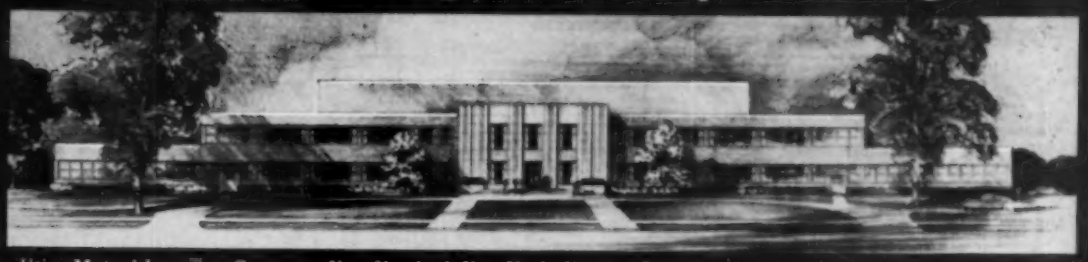

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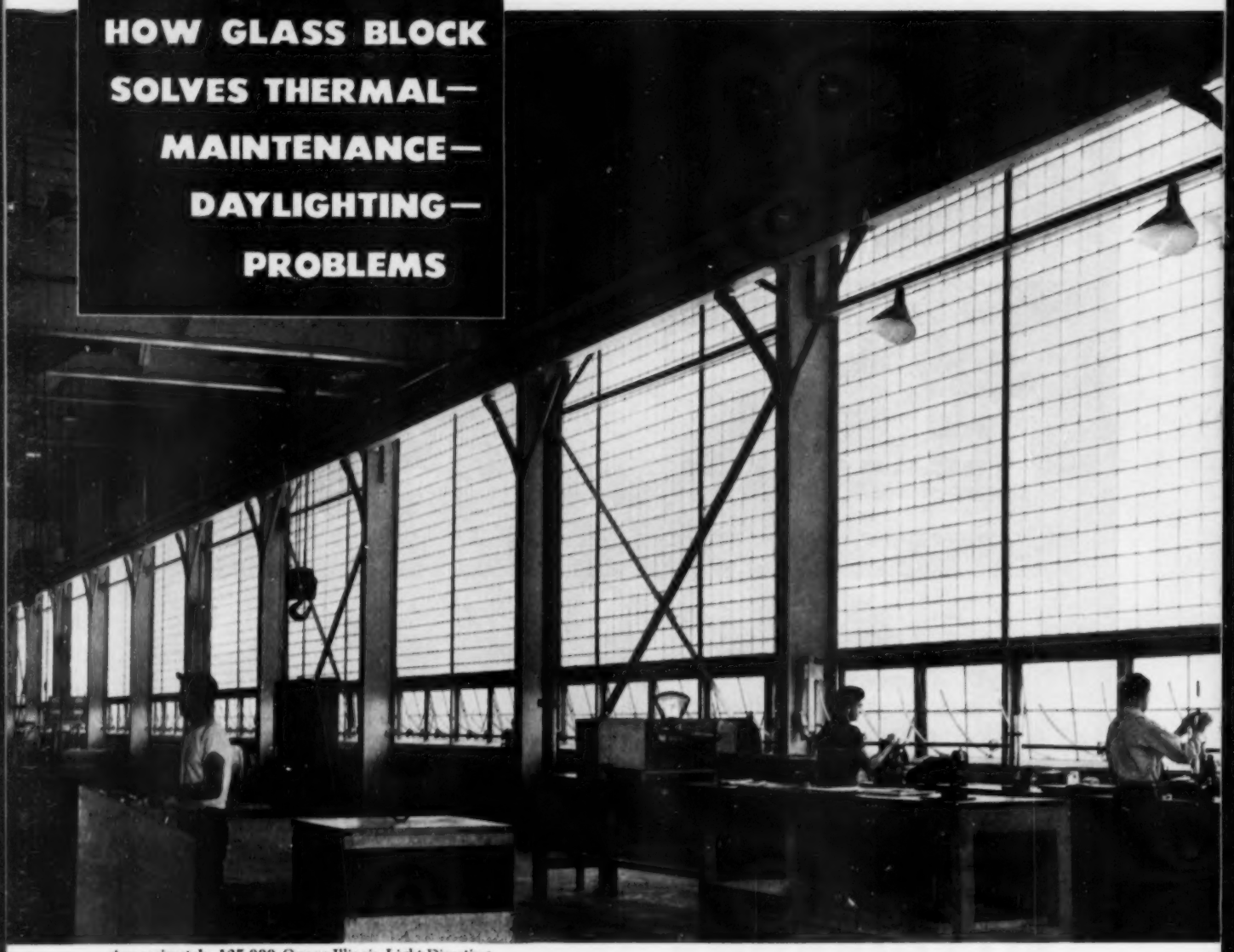
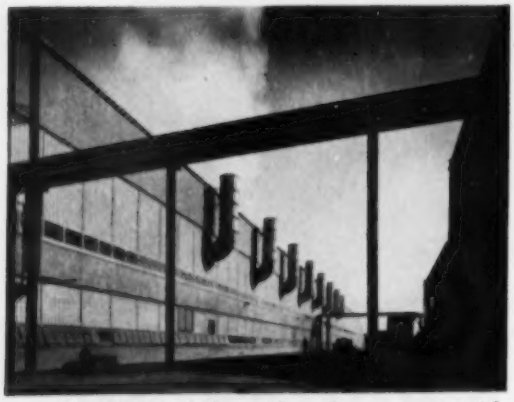
HOW GLASS BLOCK SOLVES THERMAL— MAINTENANCE— DAYLIGHTING— PROBLEMS



Approximately 125,000 Owens-Illinois Light-Directing Glass Block are in the new buildings at International Paper Company's huge Moss Point, Mississippi, plant.



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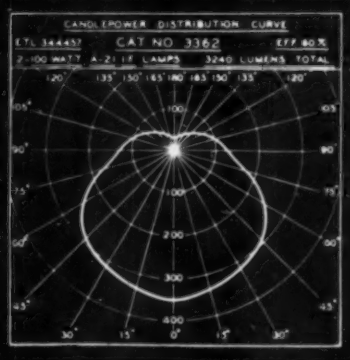

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Over 25 years' performance, on job after job, clearly shows that 'Incor' produces more dependable results, at less cost, than by experimenting with "an extra bag of ordinary cement in the mix." One contractor summed it up by saying that he sleeps sounder at night with 'Incor'* on the job. *Reg. U.S. Pat. Off.

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Tests of 3x3x12-inch concrete beams cured in air of 50% relative humidity at 70°F. after 1 day in mold. Results are average of 3 specimens for each cement from batches mixed on different days.

Mix	Water	Drying Shrinkage—inches per 100 ft.				
bags/cu. yd.	gal./bag	3 d	7 d	28 d	3 mo.	1 yr.
Average 10 Lone Star Type I Cements (6-inch slump)						
3½	10.59	.156	.264	.516	.612	.648
4¼	8.27	.156	.24	.516	.624	.684
5	6.78	.18	.252	.528	.66	.696
6	5.62	.168	.228	.48	.636	.684
7½	4.65	.156	.228	.468	.636	.696
Average 10 'Incor' Type III Cements (6-inch slump)						
3½	10.48	.156	.252	.516	.648	.672
4¼	8.29	.156	.216	.48	.636	.672
5	6.9	.144	.216	.468	.636	.672
6	5.83	.156	.228	.444	.636	.684
7½	4.93	.156	.24	.48	.648	.708

Shrinkage of 'Incor' concrete is the same or less than concrete with Type I cements, through a wide range of equivalent mixes. 'Incor' develops greater strengths at early and later ages and is therefore better able to withstand shrinkage stresses. On the job, proper curing, starting at the earliest possible time, reduces shrinkage effects with all types of cement.

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job costs—can they be controlled?

by Siegmund Spiegel*

Before actual work on a commission is begun, it is obvious that a dollar budget must have been prepared previously, which allotted certain sums of money to various items of production work. This budgeting of funds should be closely related to the Production Schedule for the job under consideration. Scheduling of Production was discussed in last month's article. By consulting the Production Schedule for the amount of time allowed for each phase of the work, as well as records of earlier jobs of a similar nature, it should be relatively simple to allot a dollar equivalent which may be spent for its execution. It is assumed that the Production Schedule will have already taken care of the detailed analysis and estimated time requirement for the work to be done, in five stages: programming and schematic drawings; preliminary drawings; working drawings; checking of shop drawings; supervision of construction.

(The working drawing phase should be broken down into separate component parts, such as: number of site or plot plans; number of plan sheets; number of elevation sheets; number of section and detail sheets; etc. Each sheet in such a breakdown should be weighed carefully for its time requirement. A careful analysis at that time will obviously show the extent of detailing required. While the job, of course, should be as completely detailed as the type of building warrants, an overelaboration through repetition of similar and obvious details will make the job costly to the architect without proving to be of additional benefit to the contractor.)

keeping of time

Practically all offices have a system by which each commission is assigned a Job Number. The system of numbering will vary from office to office. While some use consecutive numbers, others start with number 1 for the first job in each year, to which is added the year itself, e.g., job 154 = first job in 1954. A copy of the Job Number List is made available to all personnel. Each man in filling in his timecard will enter the number of hours worked daily on the project. While the timecard form, too, varies among offices, it should be so arranged as to enable the draftsman to enter a short description of his work (e.g., "First Floor Plan," "Exterior Wall Sections") and the name of the building if the project consists of more than one type or number. Before the working drawing stage is reached, all work should in addition be indicated as "Sketches," "Preliminary," etc. At the end of a pay period (which varies in different offices, but is generally weekly or bi-weekly) the timecards are collected, checked for accuracy and description of work done, and then are used as the basis for preparation of the period payroll summary sheet.

cost records

Bookkeeping systems will vary from office to office, and so will forms such as the Payroll Summary Sheet. However, experience has proven that a form which shows not only the columns required for determining the net amount to be paid the draftsman, but which also shows the job on which he worked, by number of hours as well as its dollar equivalent for each, and shows in addition the respective totals for all men as to number of hours and money spent for each job, is most useful. It fulfils the requirements of bookkeeping for tax purposes and automatically shows the architect the number of hours and amounts of money spent during each period for each individual job.

watching production costs as the job progresses

It has been found quite useful to prepare a chart roughly as follows: The job is broken down into component drawings and/or phases and budget figures for hours and money for each item are shown. As the job proceeds, entries from the timecards and the money value from the Payroll Summary are made. A column is provided for estimated percentage of completion. This percentage of completion figure read in conjunction with time and money spent will indicate at all stages whether the job is "on schedule" or whether more money is being spent than had been anticipated.

On first sight a procedure such as described may appear too excessive and time-consuming. In reality, it is easily accomplished and only a few minutes per week are required to keep it up-to-date. Whatever time may be spent on keeping the chart will prove invaluable to the office when budgets for future jobs are prepared. For the purpose of illustrating such a Job Account, a job has been assumed which consists of a number of small structures, each requiring only two to four drawings; if the job consists of one building, each final drawing is represented by a separate column.

Observing the chart alone will, of course, not help to keep production costs within their limits. It will, however, inform the architect where he stands and will thereby obviously guide him in taking steps to stay within his budget. On closer examination of the work, he may detect that the job turned out to be more costly than anticipated due to various factors, such as shifting of men too often from job to job, causing excessive waste motion; improper advance planning; improper correlation with engineers; also possibly incompetence on the part of the man working on the particular drawing.

* *Architect, Office Manager for Mayer & Whitlesey, Architects, New York, N. Y.*

JOB ACCOUNT—PRODUCTION STAGE

Job #:
From: 7/4/56
To: 8/7/56

Week Ending	Supervision & Correlation & Conferences Budget		Site Planning Budget			Building "A" Budget			Building "B" Budget			Building "C" Budget			Total Job Budget		
	Hrs.	$	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	% Comp.	Hrs.	$	Over-all % Completion
	200	800.	50	150.		200	600.		150	450.		200	600.		800	2600.	
7/10/56	20	80.	20	60.	40%	20	50.	11%	10	30.	5%	10	40.	10%	80	260.	8%
7/17/56	20	80.	30	90.	90%	80	250.	55%	40	120.	35%	80	220.	45%	250	760.	26%
7/24/56	30	120.	10	30.	100%	80	250.	90%	20	60.	50%	80	200.	80%	220	660.	54%
7/31/56	40	160.				25	75.	100%	70	210.	100%	40	120.	95%	175	565.	92%
8/ 7/56	40	160.										20	70.	100%	60	230.	100%
	150	**600.**	**60**	**180.**		**205**	**625.**		**140**	**420.**		**230**	**650.**		**785**	**2475.**	

While the draftsmen working on a project should be informed of *time* limits for their particular phase, it is recommended that the supervisory men on the job should be kept informed as to the *cost* as well, as it is their job to watch the production of each phase and keep the over-all job in mind.

principals', partners' and/or new practitioner's time

Principals or partners of firms often do not keep track of their time spent on specific projects, and rarely, if ever, do their names appear on the Payroll Summary sheet. More often than not, however, they will spend a considerable number of hours on a project. This will especially be true during the periods of planning, programming, design and preliminary drawings. In many instances they will be doing work which at other times may be done by senior salaried personnel. Since the principals or partners frequently use drawing accounts, the amounts drawn are obviously not recorded as job charges. Since, however, a principal or partner may be doing the work in lieu of a hired employe, he should record his time so spent in a diary. This procedure will help to determine the actual total time spent on a job when it is analyzed after its completion, and will in turn assist preparation for a budget of a job of similar nature when the principal or partner may have to engage outside help to do his part of this work. Some client contracts, however, do stipulate payment of principal's time at an agreed rate. This type of contract will obviously make time records essential.

The young practitioner who may be doing his first job, after having quoted his client a fee which seemed adequate then, may find that his total effort may have netted him a ridiculously low amount per hour of work. Although he may for a while do all work singlehandedly, it is advisable for him to keep a record of his time. Since he may at a later date engage draftsmen, he should be aware of time generally required in order to budget his costs in advance.

final job analysis and its value to the architect

After a job has been completed, it is suggested that a short final Job Analysis be prepared. (See example. A hypothetical Apartment House is assumed; figures shown are for illustration of points only, and are not in any way realistic.) This type of analysis has proved to be of extreme value in the past, not only to show at a glance how the job turned out, but primarily to act also as a gage for establishing a budget on jobs of a similar nature which may come to the office. For each new job, obviously, adjustments must be made due to their own peculiarities. An important item to watch when making a budget based on former job experiences is the "wage" item, as average wage in any office may vary greatly from time to time. Although practically all offices are run differently, it should be possible for any office to adapt to its own system the principles illustrated.

JOB ANALYSIS

Designed: 1955
Built: 1956 **Job No.** 255

A. GENERAL STATISTICS

1. Name of Job:
2. Type of Job:
3. Name of Client:
4. Number of Stories:
5. Area of Land:
6. Construction Cost:
7. Approximate Cubage:
8. Number of Rooms:
9. Number of Apartments:

B. PRODUCTION STATISTICS

	Hours	$
10. Total Drafting:	6,500	$18,000
+ Principal	200	
	6,700	

Item	Hours	$
a. Programming, etc.	600	$2,000
b. Preliminaries	1000	3,500
c. Finals		
Supervision & Correlation	800	3,000
Plot Plan	60	200
1st Floor Plan	200	600
Typical Floor Plan	300	1,000
Etc.	—	—
d. Shop Drawings	300	1,000
e. Supervision	800	2,500
	6500	$18,000

11. Number of Final Sheets: 25
12. Drafting Cost per Final Sheet: $720
13. Weighted Average Wage on Job: $115/week
14. Average Drafting Room Wage during Period of Job: $100/week
15. Fees Paid by Architect:

Mechanical Engineer	$ 6,000
Structural Engineer	4,000
Specification Writer	500
Specialist Consultant	500
Etc.	—
Total	$12,000

16. Blueprints paid by Architect: $500
17. Travel: $100
18. Total Direct Cost to Architect:

Total Drafting Salaries	$18,000
Fees	12,000
Blueprints	500
Travel	100
Miscellaneous Permit Fees	50
Long Distance Telephone	50
Miscellaneous	100
	$30,800

19. Total Cost to Architect:

Total Direct Cost	$30,800
Overhead on Salaries (65%)	11,700
	$42,500

20. Total Fees and Reimbursals Received: $50,000
Less Total Cost 42,500
Profit $ 7,500
21. Fee Received = % of Construction Cost
22. Fee (except consultants) = x Drafting Salaries

architect's one-man show

Why shouldn't an architect, like a painter or sculptor, bring his current work to the attention of the community, in a well-planned, dignified "exhibition"? Practitioners in some few cities have outlets where they may do this, either independently, or as part of a larger show, such as the Architectural League Gold Medal Exhibition in New York. In other towns it is more difficult, but not impossible. Last year, members of the staff of A. L. Aydelott & Associates in Memphis, Tennessee, used their own offices (in the building which was published in March 1952 P/A) as a gallery most successfully.

The entire affair was handled as any art exhibit would be. Carefully planned, the show was easy for the visitor to follow, especially with the well-printed catalog. A mounted explanation of the basic philosophy of the firm was clear but uncompromising: "This exhibit is an effort to present one approach toward the creation of a new visual pattern for architecture. Aside from the technique of structure, which is the science of providing shelter, architecture exists as an art, perhaps the "finest of the fine arts" as Emerson suggests. And on through a discussion of "form language" to a conclusion which pointed out that, ". . . an architect must be not only engineer, sociologist, philosopher—he must also contain the wellspring of intuitive qualities which bring forth buildings as works of art. It is on this basis that the buildings exhibited here might be considered as creative undertakings representing something of culture in the broad sense . . . ."

As an exhibit of unusual interest the show was reviewed in the "art" columns of the local papers. "This is a one-man exhibition, in a sense," said one critic, "yet it indicates the relationship of all modern art to the actual living of contemporary man. The Aydelott structures are definitely designed to fill the needs of 20th Century humanity. It is obvious that Mr. Aydelott gives his 20th Century man credit for an appreciation of abstract beauty, a knowledge of tradition, and a desire for both culture and comfort."

So the point of the show was gotten across to "art lovers" in the community. But how about the general public? Was it over their heads, or presented on too high a level to attract them? Apparently not. The regular news sections of the papers carried stories of the exhibit, as well as the art-review columns. The *Commercial Appeal*, for instance, ran a column of news under the head, AYDELOTT WILL SHOW ARCHITECTURAL WORK, with a four-column picture, a week ahead of the opening, and another story the day before the "preview" for invited guests. The exhibit ran for seven days, from 4:00 to 6:00 p.m., and then from 7:30 to 9:30 p.m. On one day a special invitation was issued to high school seniors and college students interested in architecture as a career.

The proof of the pudding? Nearly 600 people attended the reception, and between 100 and 150 came each day during the following week. Members of the Aydelott organization—B. I. Brown, Eldred M. Brunson, Chia Yi Jen, R. W. Sawyer, and Maurice Wood were the ones responsible for planning and carrying out the exhibit—made themselves available to answer questions, of which there were many. The show was, in the opinion of the office, "very successful in every respect."

Bernard Tomson

it's the law

What effect does a change of zone have upon a property owner who has filed plans for a structure whose "use" would be prohibited under the new law?

In an interesting case, *Kunz* v. *Hill, Jr.*, *New York Law Journal*, January 6, 1954, pp. 13-14, the Court had before it for determination the following situation:

(a) On *August 4, 1953* the Town Board of Yorktown, New York, adopted a resolution recommending the rezoning of several areas, and then referred this resolution to the Planning Board.

(b) On *August 7, 1593* the Planning Board recommended the adoption of the zoning law revision to the Town Board.

(c) On *August 11, 1593* at a regular meeting of the Town Board, a resolution was passed providing for a public hearing on the matter.

(d) On *August 12, 1953* the plans and application in question were filed.

(e) On *August 13, 1953* the notice of public hearing was duly advertised.

(f) On *August 28, 1953* the public hearing was held, the revision passed and adopted.

This schedule indicates that *following* the Planning Board's action but *before* the adoption of the zoning change, the owner filed his application for a building permit, to allow him to erect a retail store or professional offices on a site, which was, under the Town Board's resolution, in an area to be rezoned from business to residential. The building inspector, aware of the proposed revision of the zoning law, did not pass upon petitioner's application. The Court was requested to direct the inspector to issue the permit to petitioner on the grounds that the erection of a business structure was still permissible at the time of the filing of the application for a building permit.

In denying the petition and dismissing the proceedings, the Court went on to answer these questions:

1. *What is the power of a building inspector with regard to the granting or denial of a building permit?*

"Ordinarily the issuance of a building permit is purely an administrative act, and the person charged with issuing the same must follow the literal provisions of the zoning ordinance. The granting or withholding of a building permit is not a matter of arbitrary discretion. If the applicant compiles with the valid requirements of the building zone ordinance or building code of the municipality, he is entitled to his permit as a matter of right."

2. *Will the Courts review the actions of the Building Inspector?*

"It is universally true that courts are zealous not to interfere with administrative discretion in denial of building permits, except for unreasonable arbitrary, discriminatory, or unlawful conduct on the part of the duly authorized administrative officer."

3. *Can a permit, once issued, be revoked?*

"It is well established, too, that building permits duly issued may, nevertheless, be specifically or in effect revoked by subsequent changes of law or ordinances. There are abundant authorities governing instances where a building permit has been issued but no work has been commenced, or has progressed to a substantial degree prior to the enactment of an amendatory ordinance prohibiting the use for which the permit was originally issued. In such cases, it has been held that no vested rights have been acquired."

4. *Suppose construction has already begun?*

"Similarly, there are authorities holding that a property owner may acquire vested rights by reason of having changed his position by performing substantial work, or by incurring expense and obligations in pursuance of the building permit, prior to the enactment of the amendatory ordinance prohibiting the use."

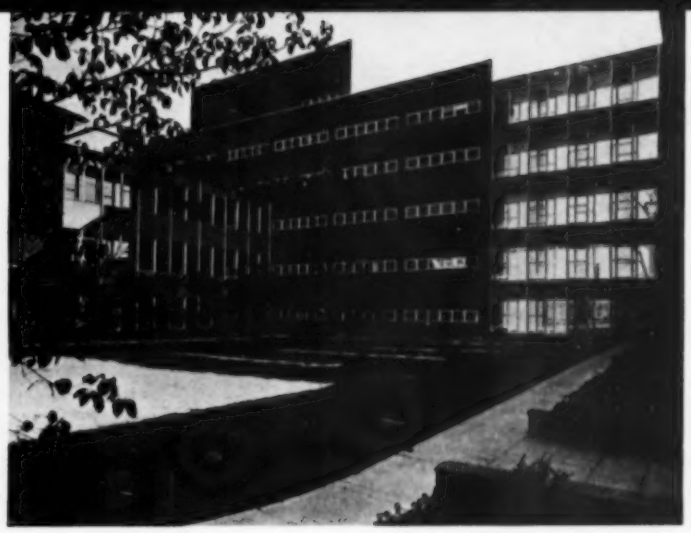
5. *Can a property owner acquire a "vested right" by commencing construction immediately after filing his application but prior to the issuance of a permit?*

"It is apparent that the use to which petitioners seek to put their property is no longer permitted under the Building Zone Ordinance (of the Town of North Hempstead). Petitioners claim, however, that if the permit had been issued promptly, they would by this time have acquired a vested right which could not be taken away by legislative amendment of the ordinance. That may be, but the fact of the matter is that petitioners have not acquired any vested rights since no permit has been issued. Any obligations incurred by them or money spent without a permit cannot give rise to a vested right.

"The contractual obligations assumed by respondent after filing his application for a building permit and prior to the issuance thereof, were not such acts as to vest any rights which could not be defeated by the subsequent amendment of the local ordinance.

"Quite apart from the above collated authorities, each case must be analyzed and determined on its own peculiar facts and circumstances. Here there is entirely no foundation for any claim of bad faith, willful delay or hindrance by the town authorities. The machinery for modification of the zoning ordinance was already in operation at the time petitioner filed his application for a building permit on August 12, 1953. The undisputed facts and circumstances negatives any finding of a deliberate design or policy of delay by the municipal authorities to frustrate petitioner on his application. Petitioner could not, and did not, acquire any vested right to the building permit by winning the race in filing his application prior to the effective date of the amendment to the ordinance, but subsequent to the unequivocal acts on the part of the municipal authorities evidencing an intention to amend the zoning ordinance."

The lesson: To protect a "use" of unimproved land it is necessary to obtain a building permit and incur "expense and obligations" or perform "substantial work."



New Demands on Old Buildings

Throughout history, the obsolescent building has been a social and an economic problem. Each new building, designed for a specific purpose, becomes in its turn a liability, as human needs change. Some structures have been sufficiently important in a historic sense to be preserved—but even many of these have been altered during their useful years. When the Romans built the Colosseum (A.D. 70-82) it served their needs well. A century and a half later, however, it was functionally inadequate, though structurally sound, and a fourth tier was added. Its later history—a pilfering ground for Renaissance builders and a tourist attraction in our time—is not likely to be the fate of most contemporary apartments, schools, or office buildings.

What community does not have such structures as a civic and economic headache? Schools, ruggedly standing, outdated for modern teaching. Hospitals inadequate for present needs (as was the Stamford Hospital, Connecticut *(shown above)*, until Skidmore, Owings & Merrill added a new Center Building in their redevelopment scheme). Stores which cannot be wished away, even though they are no longer good merchandising outlets. Houses unsuited to new needs (like the one in Glen Cove, Long Island *(below)*, designed by McKim, Mead & White, recently altered by Slater & Chait, Architects, New York.

What can be done about the obsolete structure, other than leaving it (to become a slum, in most cases) or tearing it down (an economic waste, in many instances)? There is another answer—making the building once more useful, through remodeling or addition. Right now the United States is facing up to the problem very sharply, as many of the structures built during the first half of the Century—especially during the boom period of the '20s—become "obsolete" even though they are as sound as the day they were built. Architectural answers to conversion needs fall under two chief heads:

1. Remodeling, repairing, redecorating, or re-equipping of existing units. Space is still adequate, in these cases, but it must be replanned, refurnished—in short, "modernized."

2. Additions to, or expansion of buildings that have become outgrown because of added or increased requirements. The original building often needs extensive alteration, in addition to the added space. The problem in design integration is usually a difficult one.

In this issue, instances of both solutions are shown. There are store, bank, and display-room modernizations; and there is the "alteration" of an apartment house into an office building, which required stripping down to the steel skeleton. There are additions to a school, a house, and—in the form of a distinguished new building—to the Yale University Art Gallery.

Altogether, much new activity lies ahead for architects, builders, and the manufacturers of building products, in the conversion of obsolete buildings to new uses. Tax benefits due to changes in depreciation deductions, proposed by the House Ways and Means Committee (allowing 2/3 of the cost of construction to be depreciated in the first half of its "life") and proposed changes in the capital-gains tax which would make remodeling of houses more attractive, will foster modernization.

The Astor and Victoria Theaters occupy adjoining old buildings on New York's Times Square. To unify them—and provide an eyefilling display of changing light patterns—a corrugated, frosted-aluminum façade is to be wrapped around the whole blockfront! Douglas Leigh has planned "unique, animated lighting effects" for the 26,000-sq-ft-area. Ross Photos

St. Matthew's Episcopal Church (right) *was cut into two pieces, moved five miles, and reassembled—with additions and modifications—as the new St. Matthew's* (above). Photos: Julius Shulman

location	Pacific Palisades, California
architects	A. Quincy Jones & Frederick E. Emmons
structural engineer	Richard R. Bradshaw
general contractor	Wilson Brothers

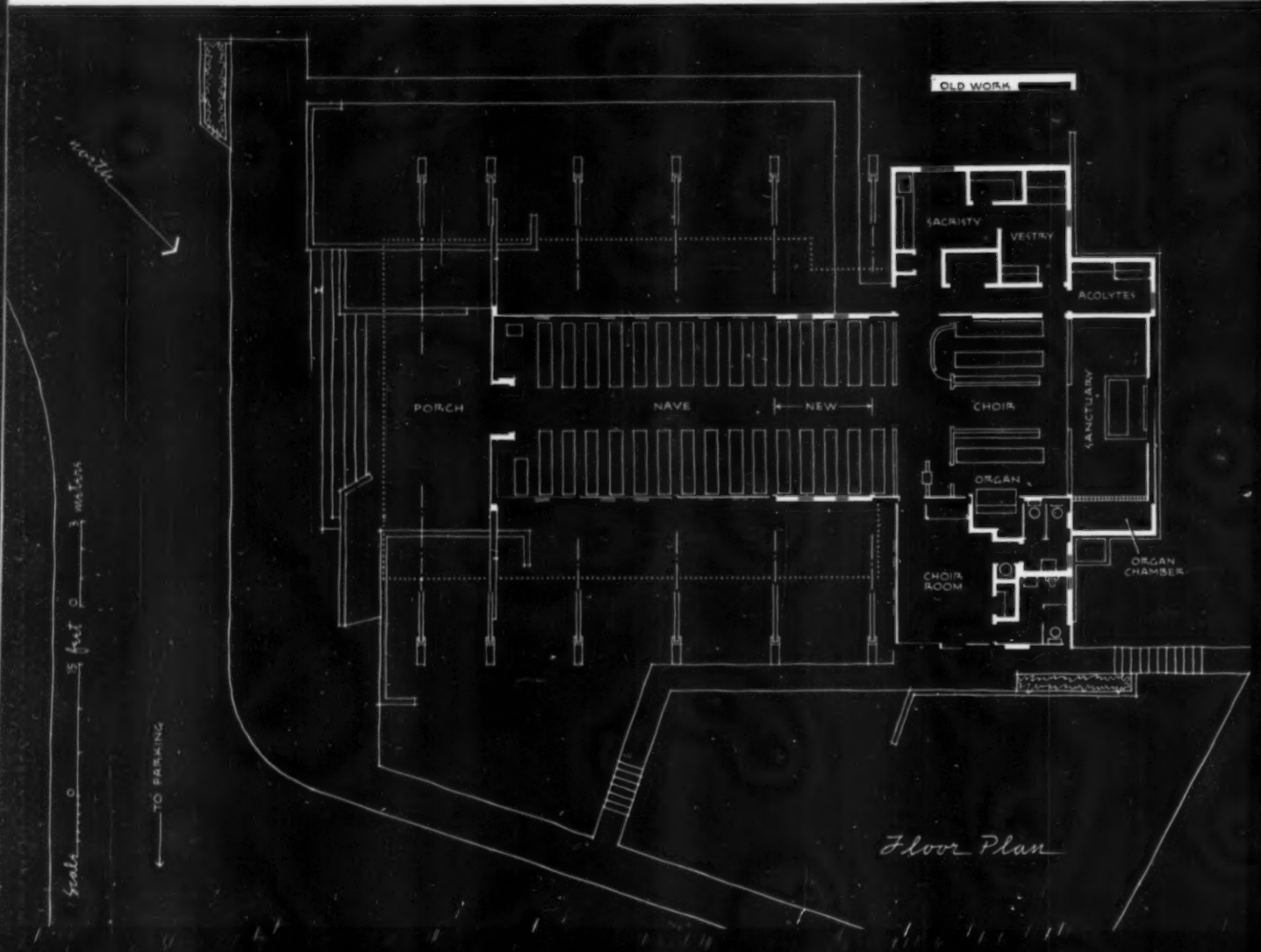
remodeling and addition: community church on a new site

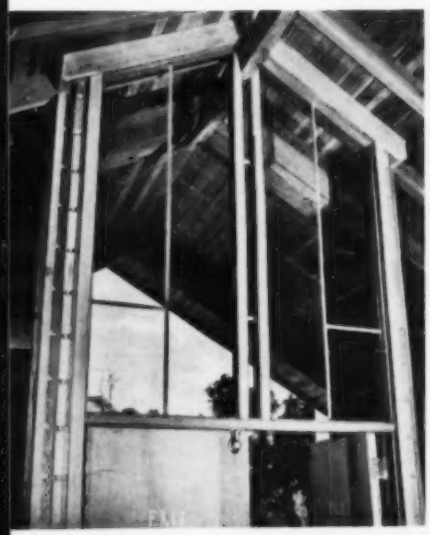
community church

Churches are being remodeled every day, but few of them undergo such surgery as St. Matthew's did. During World War II a modest church was built in the center of Pacific Palisades, California, on a relatively small site. When the communicants acquired a 75-acre farm in a secluded valley five miles away, they asked Architects Jones & Emmons to plan and design a religious and educational center, using as many as possible of the new site's existing farm structures. This the architects did. However, there was no church among the existing buildings, so two things were done to meet this the foremost need.

First, the architects designed a large church which is to be built in the future when funds become available (*January 1953 P/A*). For the present, however, it was necessary to utilize the old structure. So it was cut into two parts, moved to the new site, and reassembled with an additional bay in the nave, sandwiched between the two sections. Also, a new sacristy wing was added, and the roof was extended all around at the same pitch. Finally, dramatic wood buttresses were put on to support the widened roof and to stabilize the roof trusses; and the entrance (*acrosspage*) was changed to integrate with the church's new lines. Now, the only aspect of the old exterior that remains is its vernacular wood quality, which was its original claim to charm. Wherever possible, the old wood has been left exposed; even the old shingles (*preceding page*) were used. (Notice how they contrast with the new ones, and how the new bay in the nave and the new porch covering are marked by light patches of shingles.)

Inside, despite the use of old furnishings, the change is apparent also. Besides a longer nave, the church now has ceiling-to-plate window strips replacing the old small stock windows, making the interior much lighter.





Detail of entrance (above left) *shows how the building has been opened up to let in more light. Pitch of roof has been used to attain Gothic feeling, which many communicants still hold desirable.*

Perforated steel cross (directly above), *painted white, contrasts with organic scheme of wood and brick. Vertical paneling of old front has been replaced with diagonals, to follow pitch of buttresses and thin, light roof.*

client	Yale University
location	New Haven, Connecticut
associated architects	Douglas Orr-Louis I. Kahn
staff associates	H. D. Palmer, Lloyd Westbrook, Anne G. Tyng, Earl P. Carlin
structural engineer	Henry A. Pfisterer
mechanical engineers	Meyer, Strong & Jones
acoustical consultants	Bolt, Beranek & Newman
lighting consultants	Richard Kelly, Stanley McCandless
landscape consultant	Christopher Tunnard
general contractor	George B. H. Macomber Company

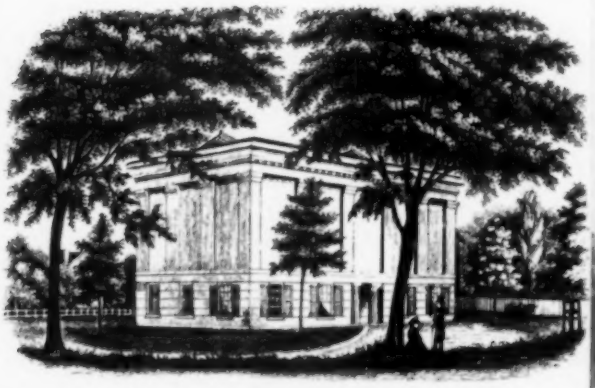
extension: university art gallery and design center

By George A. Sanderson

The new Yale University Art Gallery and Design Center is one of the most provocative structures of recent times a building about which no one seems to remain neutral. Practically doubling the existing facilities of the Division of the Arts, it houses Yale's Department of Architecture; the Print and Graphic Arts Departments; offices of the Director of the Art Gallery; and exhibit-gallery space.

Apart from its design inventiveness and refinement and its disarming basic space concept as an infinitely flexible, open-loft structure, it also appears to be a bold architectural statement by the University of a determination to return to design fundamentals: to architecture more in the spirit of the direct, original Colonial work there than in the sophisticated stylism of the Great Gothic Period on which Yale embarked in the 1920's.

Whether one *likes* the new building seems a rather obscure point, in the face of its remarkable dedication to honesty; its almost total integration; its disciplined order; and its uncompromising structural-design expression. In developing the extraordinary, 2′ 4″ deep, tetrahedral, ceiling-floor diaphragm, which harbors within its voids most of the wiring and air-distribution lines, the architects maximized the factor of flexibility. In addition, the need for any post-facto attachments was avoided; nothing needed concealment or furring in; and structure could stand proudly revealed, providing its own, inherent ornament as well as acoustical properties. While not a true, three-dimensional framing system (local codes required certain conventional methods), the "breathing ceiling" constitutes a significant transitional form between discontinuous and continuous structures that may well serve as an architectural milestone.



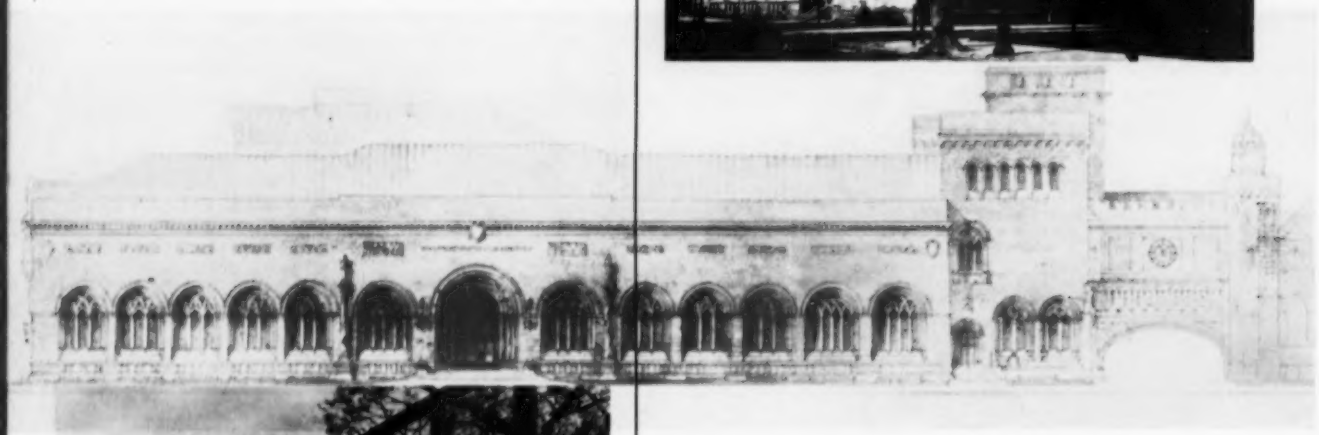
Yale's active interest in the fine arts dates from the purchase in 1831 of Col. John Trumbull's portraits, miniatures, and historical paintings of the Revolution. The Trumbull Gallery (above, left)*—first art gallery built by a university in the United States—was erected in 1832 and stood until 1901. Colonel Trumbull was the architect.*

By 1864, Yale's interest in art had so increased that it was decided to erect a building for art study—Street Hall (above)*, donated by Augustus Russell Street. Peter B. Wight was architect of this building, which is still used by the Division of the Arts.*

The new University Gallery and Design Center (left and acrosspage)*, the subject of our current study, is an extension of the Gallery of the Fine Arts* (overpage)*, opened in 1928.*

Photos: Lionel Freedman (except as noted)
Photo acrosspage: Norman Ives

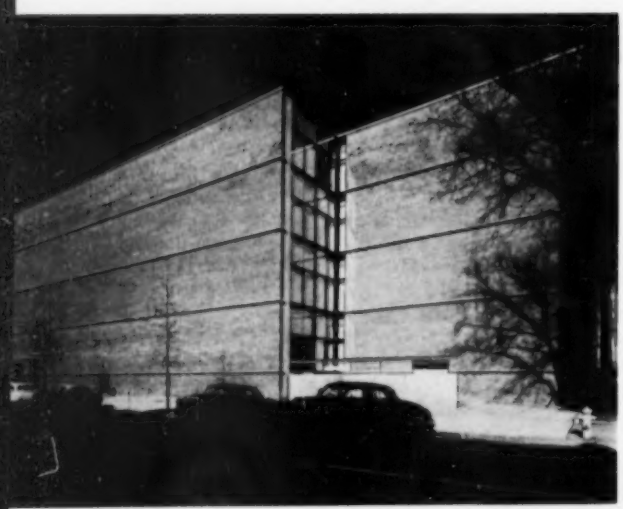
art gallery and design center



Yale's Romanesque-Gothic-derivative Gallery of the Fine Arts (top) *is about two-fifths of the structure proposed by the architect, Egerton Swartwout. It was assumed that later additions would carry out the design formula of the initial unit occupying the frontage on Chapel Street* (above). *Much water (architectural and otherwise) has since gone over the dam: new materials have appeared; new structural systems have developed; new design concepts have arisen; and educational requirements have changed almost beyond belief. By no means least important, the cost of such monumental structures is now almost prohibitive.*

In the 1940's, Philip L. Goodwin developed his design for completing the building (center left), *offering a straightforward modern scheme that respected its predecessor in a few basic factors such as building height, but made a clean break with the old.*

When further developments brought changes of administration, and the basic thinking about the gallery addition also shifted (for example, such extensive new gallery space was no longer considered desirable); the budget was much tightened; and a totally new approach was launched. Nonetheless, Louis I. Kahn, associated with Douglas Orr in the design of the new Gallery and Design Center (bottom left and acrosspage), *gives emphatic credit to Philip Goodwin for his prior contribution. "He fought the battle for modern architecture at Yale," Kahn comments. "And he won!"*



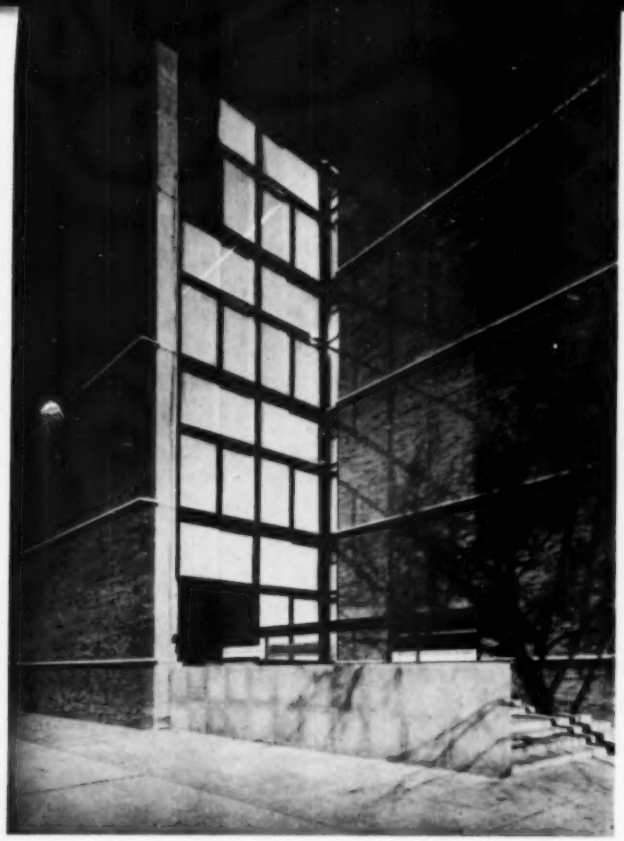
art gallery and design center

Initial considerations determined the nature of the space to be provided. Based on an idea advanced by George Howe, retiring Chairman of the Department of Architecture, it was decided that the structure should be exceptionally flexible —probably an open-loft structure, subdividable at will and subject to quick change.

The basic plan—or nonplan—developed to answer this criterion appears in white line at the top of the far column acrosspage: general, unsubdivided space on either side of a central area in which are located the various general-use services—elevator; stairway within its circular enclosure; secondary stairway; toilets, etc. The orderly reinforced-concrete frame and the deep "breathing ceiling" leave both floor and ceiling otherwise unimpeded.

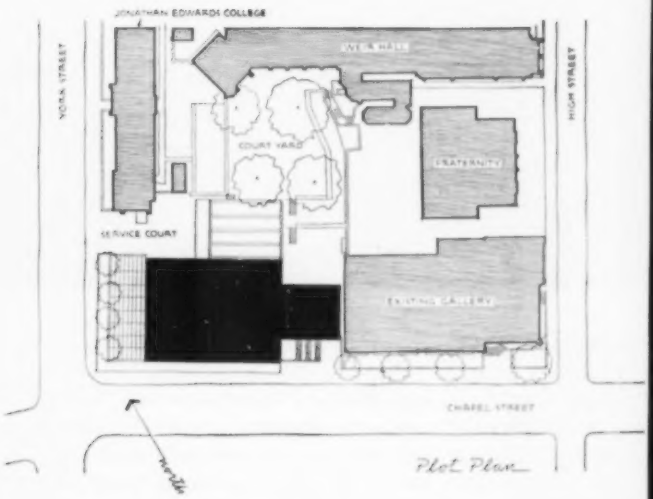
Only missing link to make the concept workable was some form of easy-to-install, easy-to-remove partitioning. Such partitioning could be placed at any point where there would be both floor and ceiling bearing—anywhere, in other words, along the ribs of the ceiling frame. Three types of panels were developed, all 5 ft. wide. One is a full, floor-to-ceiling panel that, in series, can (and does) form complete room enclosures. A variation of this is one of greater depth, with an air space between the two surface layers that serves as a return air duct. The third—and most remarkable—is a so-called "pogo stick" panel, with synthetic-rubber-tipped feet and spring-mounted, similar projections at the top that make it possible to press a panel into place at any available point. These, used singly, or in groups, form display backgrounds, partial subdivisions within large exhibit areas, etc. The panels, like the basic concept of the building itself, were the brainchildren of George Howe

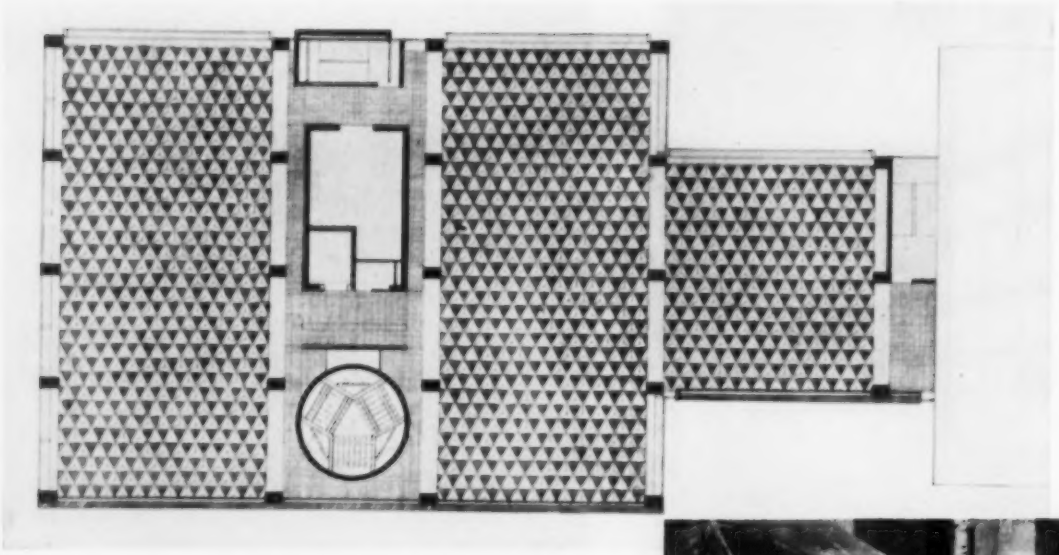
The floor plans show how the different lofts were partitioned initially. But they may be quite different next year—or next week! In reading these against the plot plan, notice on the north side how two levels come at grade—one adjoining a sunken terrace at the nominal first-floor level; the other on the second floor, leading out to a raised terrace facing the courtyard of Weir Hall (the former architectural school).

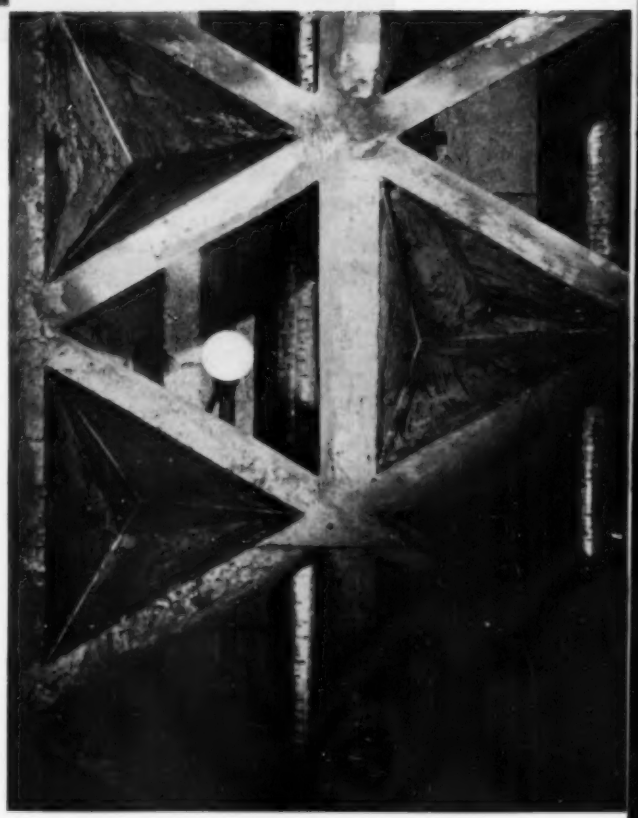


In a setback from the windowless south front, facing Chapel Street, is the east-facing main entrance area (above) *glazed for its full height. Projecting string-courses in the brick wall echo interior floor levels.*

The north front (acrosspage), *largely of glass, opens across a terrace to landscaped Weir Hall court. Details of sash are shown on a subsequent page.*







The air-distribution system within the tetrahedral ceiling allows almost complete flexibility in partition placement, since it is designed to deliver a small quantity of air to each void. The outlets are small, louver openings (some 6,500 in all) that occur along the top of the round supply ducts that run through each row of voids. This arrangement makes use of the underside of the slab (integral acoustic forming) as an inverted air-splash pan. Each of the small outlets can handle up to 20 cfm and is equipped with a double-louvered damper and frame for individual control. The supply ducts receive air from plenums in the central core of the building. Photo: Norman Ives

The hope was to develop for the floor construction a true space frame—a concept described by Henry A. Pfisterer, structural engineer, as "fastening a continuous plane element to the apices of open-base, hollow, equilateral tetrahedrons which were joined at the vertices of the base triangles in the lower plane."

However, the local building code required some sort of beam system. The modified system, in Pfisterer's words, "consists of concrete T-beams, with deep, inclined stems spanning 40 feet between centers of supporting girders, combined with triangular, inclined bridging elements arranged to simulate the original concept." For further data on this structure, see drawings and discussion that appeared in January 1953 P/A.

This three-dimensional system was not calculated as a true space frame. Nonetheless, it provides comparable hollow spaces and accessibility within the structure to contain air-distribution ducts and trolley duct for lighting units. The trolley duct is attached to the underside of the layer of acoustical material that was

used as the form for, and became integral with, the surface floor slab. According to Richard Kelly, one of the lighting consultants, it was hoped (for maximum flexibility) to run trolley duct in *every* row of voids; but economy necessitated limiting this to every other row.

Two principal types of (interchangeable) lighting units were used:

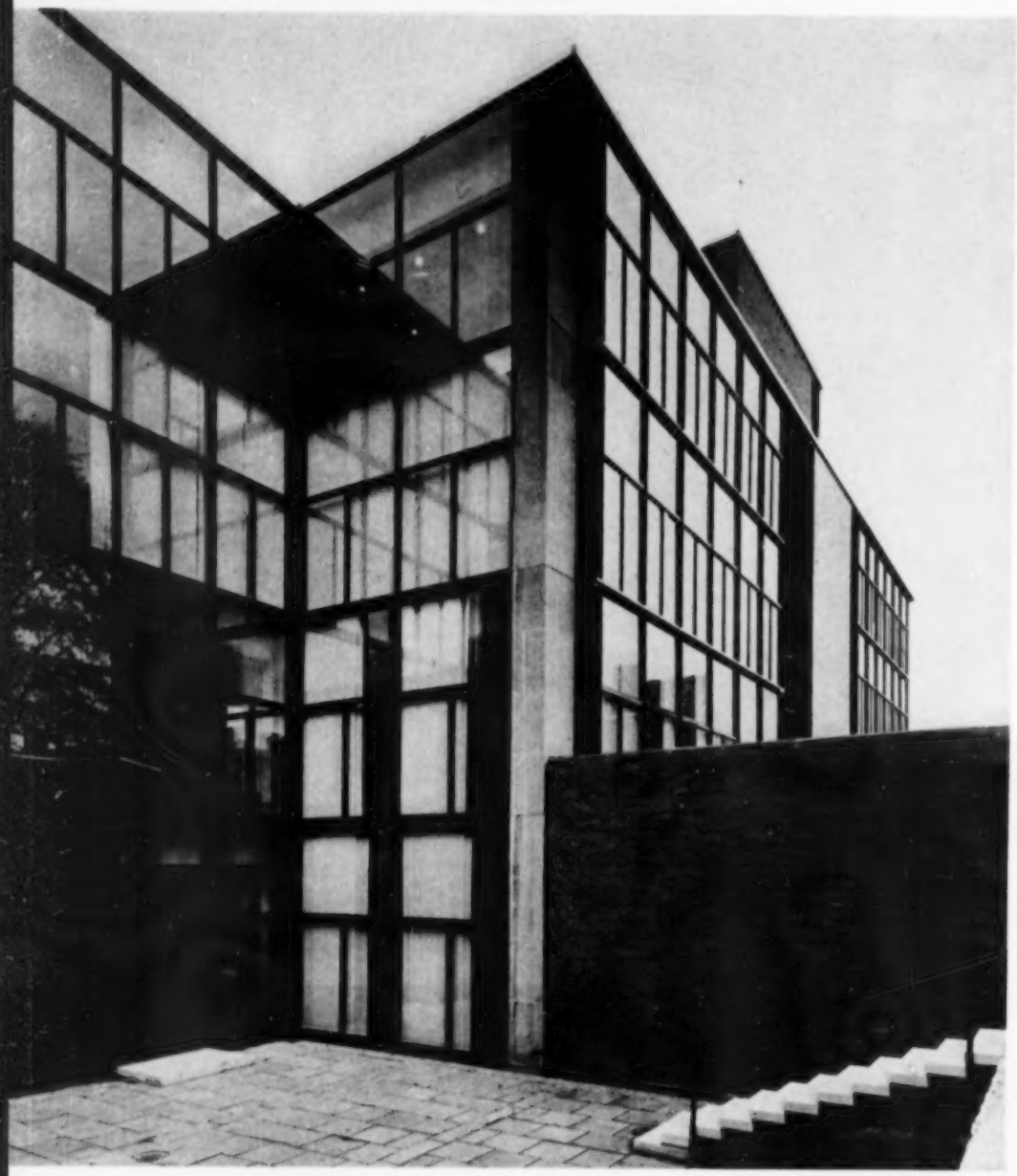
1. A PAR-light fixture, with shielded housing and spread lens, for projector lamps. Advantages for gallery lighting include direction flexibility (for optimum angling); ease of attachment and maintenance; adjustable intensity (from 2,000 to 23,000 candlepower); and the spread lens that eliminates the hard, distracting edge of light or "scallop."

2. A soft, downlight reflector ellipse with silver-bowl lamps—for offices, classrooms, etc. These produce very soft edge shadows at work level; a crossing of rays (similar to that of the ordinary camera lens) makes it possible to eliminate bright light patches at edges of tetrahedrons; and they are highly efficient in the use of wattage.

"Pogo stick" panels (right) *may be disposed in a number of ways to partition exhibit spaces* (below) *or any other partial subdivisions of the loft areas.*
Panel photo: A. Burton Street

Other forms of subdivision are furniture and rows of storage units (left), *and full-height panels that form complete rooms* (below).

Placement of panels within space and arrangement of lights within the depth of the "diaphragm" can produce almost any mood—a dim, cathedral-like aura (right); *a huge space awaiting a new project* (below left), *or a daylighted gallery for student critiques* (below right).

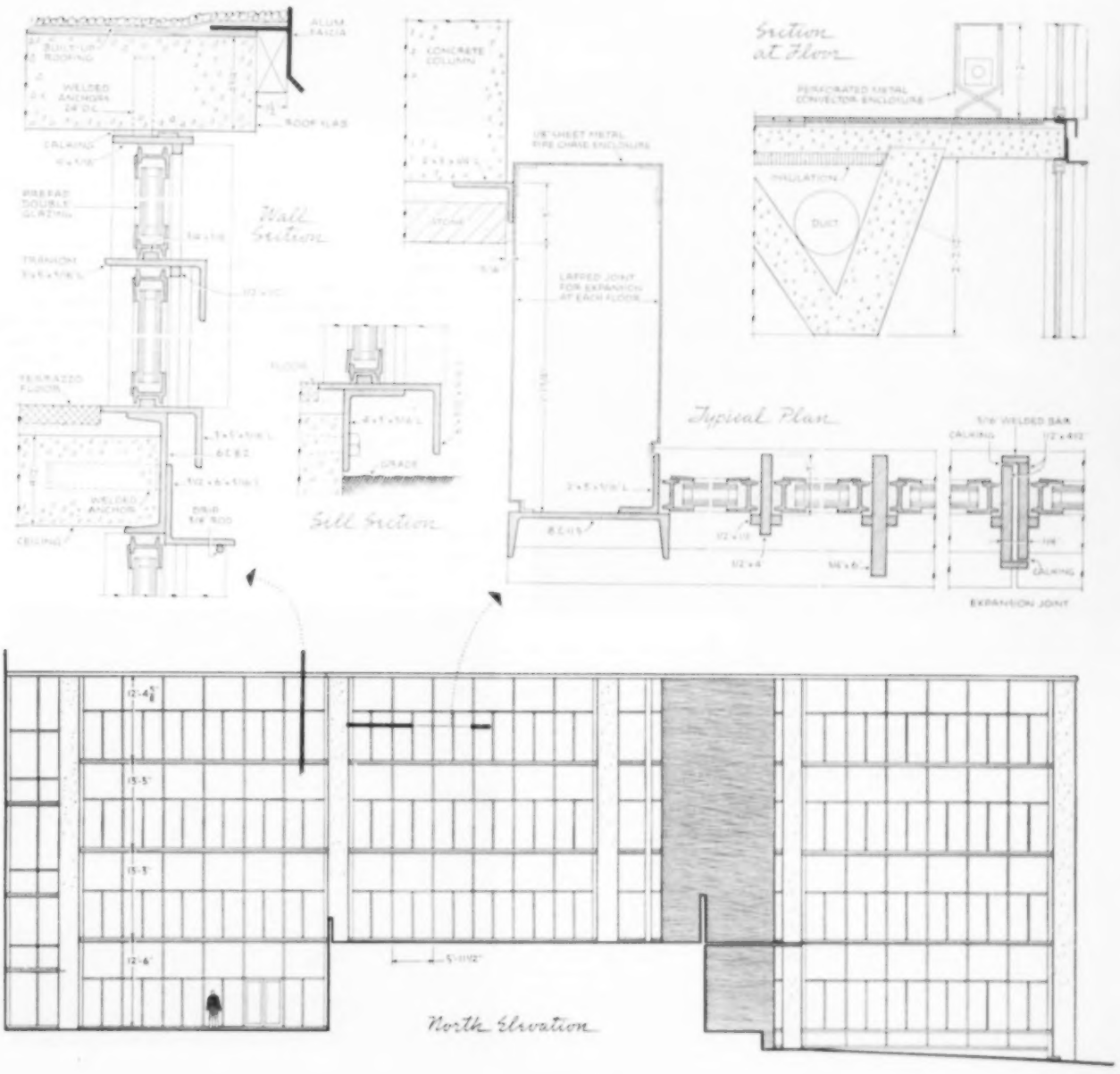


Once the structural order of concrete frame and "breathing ceiling," and flexible device of partitioning had been established, "expression of method" became a paramount design wish—to show how everything was put together and how each part works; even to exaggerate these; to have no extraneous parts; to have every element justify itself, and, so far as possible, be self-explanatory. Detail of window-wall areas documented on these two pages is an excellent instance. Sash members are all made up of standard steel sections, joined in such a way that each performs a useful function. For ARCHITECT'S DETAILS *of roof, pages 130-131.*

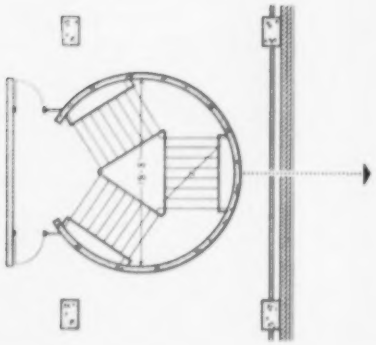
Along the north wall of the building (acrosspage top), *grade occurs at both first- and second-floor levels, due to the terrace embankment forming coutryard to the rear.*

The Planning Section (acrosspage bottom) *on the second floor, looks across the sunken terrace (future sculpture court) to Weir Hall, the old architectural school at the rear of the property.*

Adjoining the upper, terrace level is a space (left), *currently destined for use as a lounge. The light-control panels, or window shades, are of glass-fiber fabric, hung from paired curtain tracks and adjusted horizontally by pull cords.*



art gallery and design center



Everywhere, construction method is documented and revealed. In the detail looking toward the circular stair-enclosure (above) *note how marks of forming are left on concrete columns and girders; holes that received lugs in formwork for the stair silo remain—as decoration, as well as to show how it was built. Even return-air ductwork that occurs in the ceiling across this area is observable—through aluminum-mesh grills. Joints of erecting, far from being faired out of sight, are boldly exploited with "shadow joints." In the tetrahedral ceiling "lung," all elements are left exposed exactly as they set—unpainted and unadorned.*

The triangular stairway pattern within a circular enclosure is vivid instance of the exaggerated design expression, fairly shouting "here is staircase" and "here is enclosure." Handrails are rigid stainless steel (obviously and reassuringly strong), while the guard area is a mere crocheted mesh of stainless steel (psychological protection; all that is needed).

"The building is exciting and, I am sure, will be extremely serviceable. The architects should be congratulated on the design, and Yale University should be congratulated on having a good contemporary building for its art gallery." Leopold Arnaud

"It is the outstanding academic building produced by the modern movement. . . . Rarely is a building of such technical interest realized in such refinement. Here structure is so integral with architecture it has acquired the value of ornament." Frederick Gutheim

"The decision to treat the new Yale Art Gallery and Design Center as a block of space, to be divided and redivided as needs require, is a splendid piece of architectural statesmanship. Granted the validity of the major decision, and it strikes me as unquestionable, any comments about detail in executing the concept become of very minor importance." Robert W. McLaughlin

"The gallery is an outstanding piece of architecture. . . . It achieves architectural distinction because here art is in control of the technologies of building. Whatever shortcomings might be pointed out are hardly sufficient to dim my enthusiasm. . . ." G. Holmes Perkins

"It is encouraging to see a building that has the quality of monumental, bold design—which is very rare today. . . . It follows a trend toward a more sculptural expression in architecture which possibly started with Le Corbusier's apartments in Marseilles." José Luis Sert

construction

Foundation, floors, walls, roof: reinforced concrete—Alpha Portland Cement Company. Belgian steel. **Wall surfacing:** exterior brick—Stone Creek Brick Company; slate memorial tablet—S. H. Hamm & Son. **Floor surfacing:** oak; terrazzo; rest rooms and janitor's closets—American-Olean Tile Company. **Ceiling surfacing:** exposed concrete; expanded aluminum mesh in center core area—Penn Metal Company, Inc. **Roof surfacing:** tar and gravel—Allied Chemical & Dye Corporation, Barrett Division; terrace: bluestone. **Waterproofing and dampproofing:** pitch-conite. **Insulation:** wood-fiber-cement planks—Tectum Corporation. **Partitions:** cement block—Plasticrete Corporation; brick—Stone Creek Brick Company; plywood—United States Plywood Corporation; steel toilet partitions—The Sanymetal Products Company, Inc. **Windows:** frames—Sexauer & Lemke, Inc.; sash—Hope's Windows, Inc.; double-glazed glass—Pittsburgh Plate Glass Company; glass-fiber curtains—Owens-Corning Fiberglas Corporation. **Doors:** interior hollow metal—Williamsburg Steel Products Company; oak—United States Plywood Corporation; service doors—Cornell Iron Works, Inc.; passenger elevator doors—Art Metal Construction Company; bronze entrance door frames—Ellison Bronze Company; roof scuttles—Babcock-Davis Associates, Inc., The Bilco Company. **Hardware:** lock sets—Sargent and Company; door closers, hinges—The Oscar C. Rixson Company; curtain tracks—Kirsch Company. **Paint and stain:** exterior and interior—The Martin-Senour Company.

equipment

Furniture: library tables and chairs—Avard; library stacks—Remington Rand, Inc.; office furniture—Knoll Associates, Inc., The Herman Miller Furniture Company, Security Steel Equipment Corporation, The Globe-Wernicke Company; chairs—Laverne Originals, Konwiser, Inc.; museum cases—L. F. Dettenborn Woodworking Company. **Elevators:** passenger cabs—The W. S. Tyler Company; hoisting equipment—F. S. Payne Company; freight cabs—Otis Elevator Company. **Miscellaneous:** stainless-steel stair rail—Babcock-Davis Associates, Inc.; stainless-steel stair rail mesh—Korb-Pettit Wire Fabrics & Iron Works, Inc.; granite steps—John Swenson Granite Company. **Lighting fixtures:** circulation areas—Century Lighting, Inc.; exhibition and office areas—Edison Price Inc.; fluorescent fixtures in classroom area—Ruby-Philite Corporation; exit lights—Prescolite Manufacturing Corporation. **Electrical distribution:** service entrance switch, panelboards, multibreaker—General Electric Company, Trumbull Electric Department; duct system—Bulldog Electric Products Company; wire—Phelps Dodge Copper Products Corporation; conduit—General Electric Company; wiring devices—The Bryant Electric Company. **Plumbing and sanitation:** shower controls, water closets, slop sinks, lavatories—American Radiator & Standard Sanitary Corporation; toilet seats—C. F. Church Manufacturing Company; flush valves—Sloan Valve Company; floor drains—Josam Manufacturing Company; sump pump—Penberthy Injector Company. **Heating:** converters—National Pipe Bending Company; boiler at Yale Power House; condensate pump—The Nash Engineering Company; fin-pipe convectors—Vulcan Radiator Company; radiators—American Radiator & Standard Sanitary Corporation; heaters at entrances, coils, ventilators—The Trane Company; pneumatic controls—Minneapolis-Honeywell Regulator Company; convector covers—Oliver Whyte Company. **Air conditioning:** 25-ton absorption-type refrigerating unit—Servel, Inc.; lithium chloride refrigerant; specially-designed louvered outlets, registers—Tuttle & Bailey Inc.; blowers, cooling coils—The Trane Company; electromatic filters—American Air Filter Company, Inc.; pneumatic controls—Minneapolis-Honeywell Regulator Company; dehumidifier—Westinghouse Electric Corporation; pumps—Worthington Corporation.

remodeling: children's shop in a store for rent

location | Berkeley, California
architect | Henry Hill

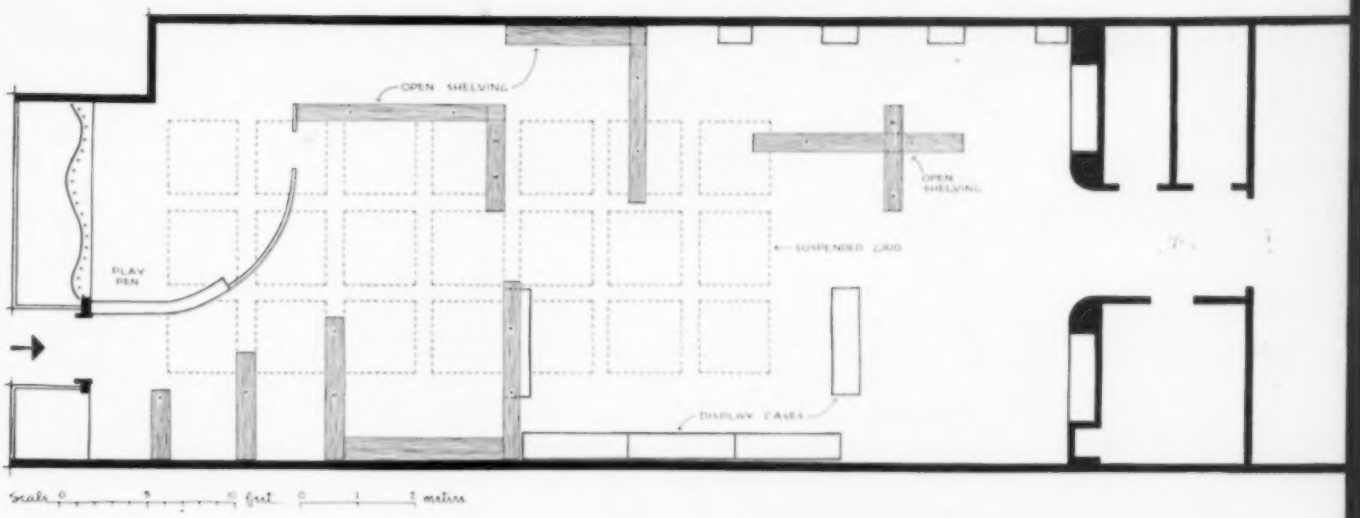
Sometimes new demands are made only on the insides of old buildings—like "The First 5 Years" children's shop near the University of California campus.

Two sisters who operated a little out-of-the-way children's clothing shop had saved $1000 to gamble on expansion in a new location, and they asked Architect Henry Hill to help them. Nothing was salvageable from the old shop, and they decided to do as much of the actual work on the new one, as possible. Stopping in evenings, the architect drew the plans a stage at a time, always with an eye on the budget. (On opening day, he and his associate, Karl von Hacht, helped hang the fixtures and lay out the stock.) The result is the charming, ingenious, and minimum-cost shop interior shown here.

Except for a few clothing racks, all shelves are hung at least four feet from the floor, by pipes or chains attached to the ceiling. This gives children an almost unlimited area in which to run, with no glass showcases to break or to smear with sticky hands. Adults must stay within the aisles, however, as they are defined four feet above the floor.

Wood frames were suspended (*see* SELECTED DETAIL) from ceiling hooks, installed by a contractor. (The rest of the work was done by the owners.) The frames give the appearance of a lowered ceiling and serve to display toys. Through the frames hang globular frosted lights, also suspended on chains of various lengths. These the architect helped to install a few hours before opening.

Business has been brisk, so the sisters will make other suggested improvements as soon as they get a breather.



Very small children can be put in the playpen (plan above) *while their mothers shop. Frames and simple clothing cases were made by owners and their family. Chains and lighting fixtures are brass-coated iron. Walls are painted copper color, gray, and gold.*

Linoleum (acrosspage) *came with the rented space and will be replaced in time.* Photos: Morley Baer

remodeling: shoe display room from rental space

A common demand on existing buildings comes from tenants of business rental space who wish to alter the premises into more appropriate, up-to-date settings for their businesses. An excellent example is the shoe display and salesroom shown here. The rented space consisted of two adjoining rooms with a masonry wall between. Removal of the wall gave the designers a spacious, squarish area within which to develop their scheme.

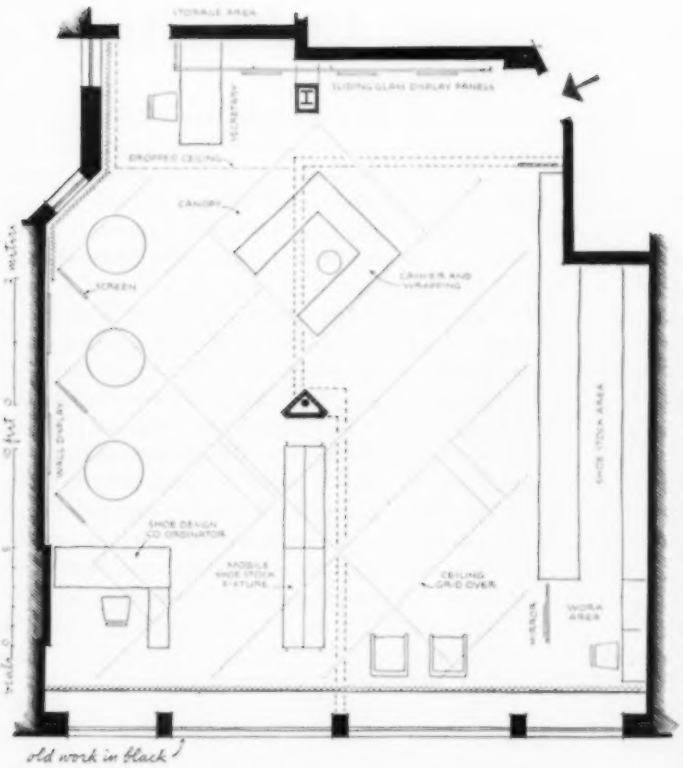
Most of the clientele is professional—actresses, models, dancers, etc.—and the custom of the 60-year-old firm is to allow customers to browse at will and serve themselves. Experienced clerks, who are chiefly busy with filling outside orders, are available when needed.

Two main areas are defined. The half nearest the entrance is the browsing area, bordered on one side by a wall of shoe-stock shelving, and on the other by the cashier's desk and mobile (wheel-mounted) stock cases that allow the space to be shaped in a variety of ways. Behind the open-stock shelving is a closed, reserve stock room.

In the other half of the room, furthest from the entrance, the various shoe styles are displayed, on tables or hung from vertical panels of painted, metal lath. Along the rear wall of the room photographs tell the story of the Capezio shoe.

A ceiling grid of steel channels carries wiring and lighting units (both fluorescent tubes and spots); and from it are suspended the metal-lath display panels and the diamond-shaped, ice-blue translucent plastic panel above the cashier's desk (*see* SELECTED DETAILS).

location	New York, New York
designers	Romaldo Giurgola, Roniero Corbelletti, Joseph G. Merz
general contractor	Richter & Ratner Contracting Company



Beyond the cashier's desk and open-stock shelving (left) *are south windows curtained from wall to wall.*

Expanded metal-lath display panels (above) *are suspended from the ceiling grid of metal channels.* Photos: S. C. Valastro

total reconditioning: 430 Park Avenue

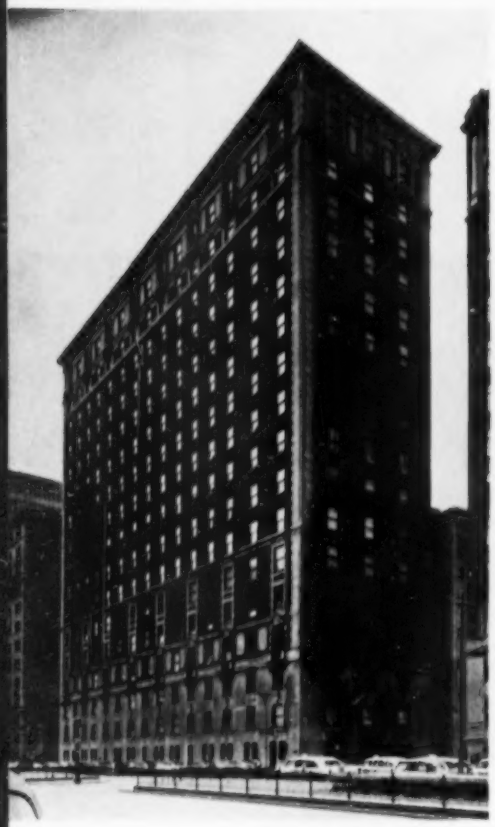


Photo: Adolph Study

One of the most unusual and certainly one of the most thorough modernization projects ever planned for a multistory, steel-framed building is now nearing completion at 430 Park Avenue, from 55th to 56th Streets, in New York. Once a luxurious apartment house (*left*)—many of the units contained 17 rooms and rented for as much as $12,000 per year—the original plans for this block-long structure, by Architects Warren & Wetmore, were approved about a year before the passage of New York's 1916 zoning ordinance governing setbacks. During the past year, this building was stripped of all enclosing masonry and windows, all interior partitions and fireplaces, and all mechanical and electrical services. To the exterior of the 18-story frame has been added an aluminum and heat-absorbing glass façade fronting on Park Avenue, and brick masonry with steel-sash windows on the remaining three sides.

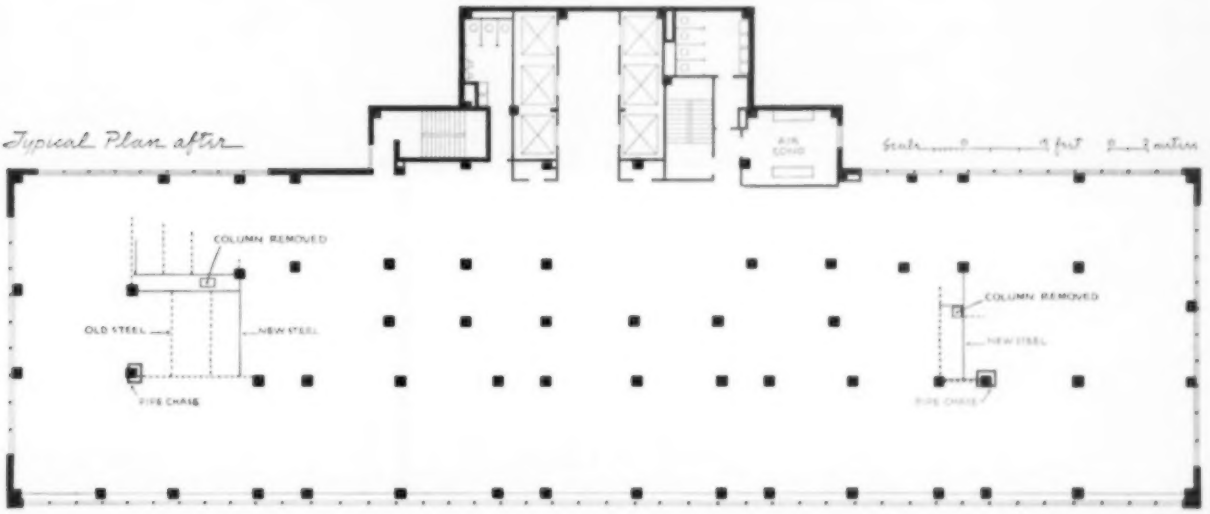
As most of the apartment buildings below 59th Street along Park Avenue are no longer considered economically feasible, that area has been assumed to be most logical for the extension of commercial buildings in the mid-town section of Manhattan. In a long-term lease with the William Waldorf Astor estate, owners of the property, it was agreed that the present apartment building would be demolished *except* for the steel frame, which would remain intact. Although the structural-steel sections are heavier than would be required by the present building code, the frame itself is in excellent condition. Also, it is higher, without setbacks, than would have been possible if an entirely new structure had been designed to meet existing zoning restrictions. Although the columns of the original structure did not follow a rigid pattern of square or rectangular bays, due to the peculiarities of apartment planning in Warren & Wetmore's day, the spacing was not considered unreasonable for commercial office-building layouts. (Note that the column irregularities required slightly different north and south elevations. Exterior vertical mullion intervals also vary slightly, though this is not apparent to the eye.) Actually, only two columns were deleted from the existing building and the problem caused by their removal was easily remedied by the addition of a few steel sections (*see typical floor plan after alteration, acrosspage*). The columns eliminated were formerly needed to help frame the elevator shafts. A new core that now occupies what were

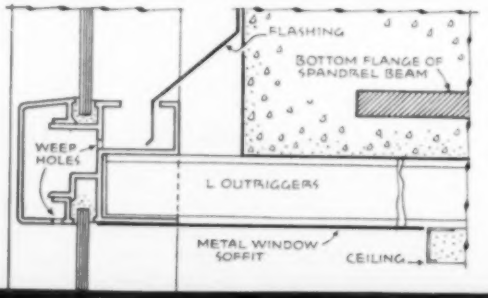
Typical Plan before

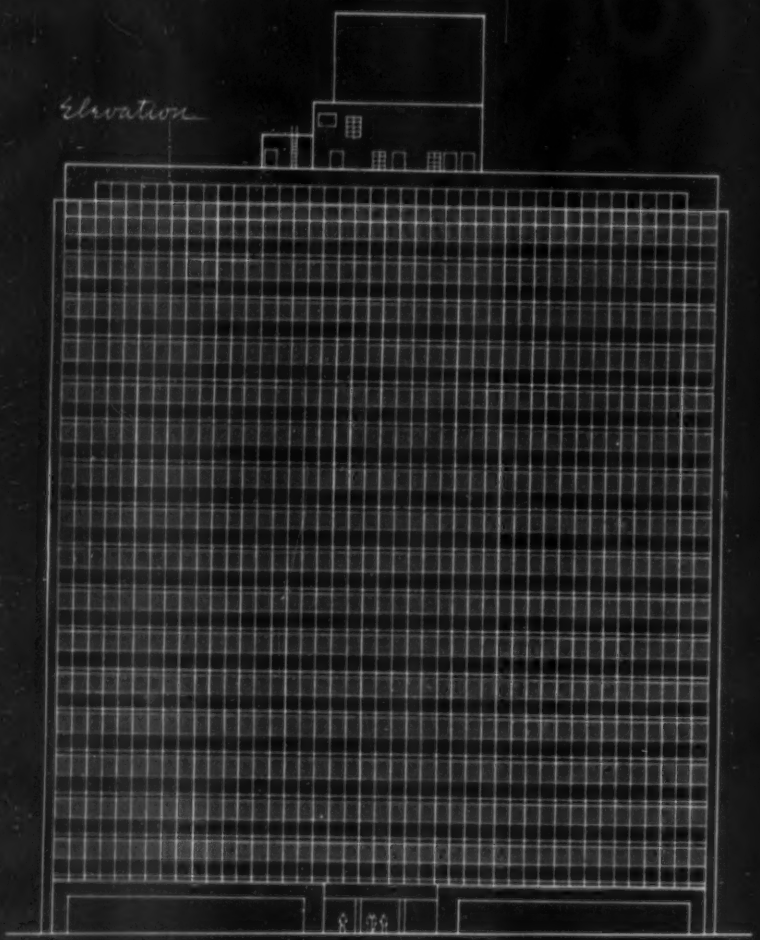
once courtyards at the rear of the building, contains the new washrooms, elevators, stairwells, and, on alternate floors, air-conditioning equipment. Twelve additional columns were required to frame this gained space (*shown in black, below*).

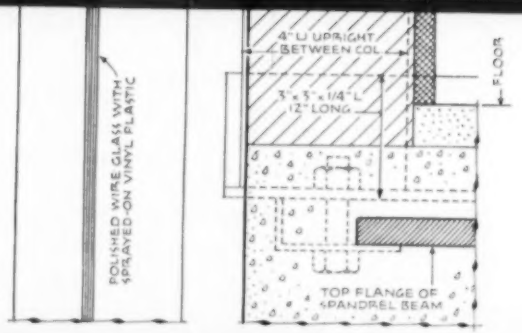
On the Park Avenue elevation, vertical, anodized-aluminum mullions occur at approximately 4′ 6″ intervals and extend (from the top of the marble at second-floor level) the full height of the building. Horizontal head, intermediate, and sill mullions are also of anodized aluminum (*see details*). On each floor, every other window has an operable vent while the remainder of the glazing remains fixed. At spandrels, the back of the polished-wire, fixed glass has been covered with a dark-green vinyl-plastic spray so that the 4″ cinder block walls and concrete fireproofing are hidden from view. Heat-absorbing glass will be installed on the Park Avenue elevation only and this single glazing will be used in conjunction with aluminum venetian blinds. Between the second-floor level and grade, an imported dark, gray-green marble has been applied.

All that remained of original apartment house after demolition were its framework (columns are shown in black, acrosspage), *concrete floor arches, and foundations. New work is shown* (in black, below).
Photo (above): courtesy of *Real Estate Forum*








POLISHED WIRE GLASS WITH SPRAYED-ON VINYL PLASTIC
4" U UPRIGHT BETWEEN COL
3" x 3" x 1/4" L 12" LONG
FLOOR
TOP FLANGE OF SPANDREL BEAM

Wall Section
3" SCALE

The finished floor-to-floor height is 12′ 2″ and the typical ceiling height, 9′ 3″, allows adequate space for the ductwork and conduit of the mechanical services. All ceilings will contain trofer-type fluorescent-lighting fixtures containing shielded-plastic louvers.

The architects and engineers considered that a split-type air-conditioning system would be most appropriate for office space with these proportions (approximately 56′ x 200′). Accordingly, they have specified a central system that will operate in conjunction with individual units located around the perimeter of the building. A specially designed cooling tower is located in what appears to be an added penthouse atop the structure. It has been set back approximately 57′ from the Park Avenue elevation and 75′ from the side street elevations. It is concealed behind a screen of asbestos-cement panels which were selected for their lightness, as they add a minimum of weight to the frame. After the water has been cooled it is piped to the basement for refrigeration. There a centrifugal-type electrically-driven compressor provides chilled water that is supplied to the various elements of the system. Air-conditioning equipment located on alternate floors answers the needs of the interior or general office areas; at the perimeter, individual units condition the air as required by the season. Manual controls on the individual units not only regulate the temperature but also the quantity of air for each office. For its heating requirements this air-conditioning system will make use of purchased steam.

Vertical transportation will be manned by specially trained and uniformed elevator operators and starters. Electronic, supervisory controls will provide 24-hour self-regulation to conform with changing traffic patterns so that the equivalent of express service to every floor will be enjoyed. Each of the six elevator cars will travel at a rate of 500 fpm and will have a capacity of 2500 lb. Five of the elevators will serve 18 floors, and the sixth will serve the basement as well as the upper stories.

Among the occupants of this building will be the Reinhold Publishing Corporation which has signed a 10-year lease for the third, fourth, and fifth floors; Coats & Clark, thread manufacturers; KLM Airlines; Grey Advertising Agency, Inc.; and, at grade level, a sales and display room for Jaguar Cars Ltd. is advertised as having been designed by Frank Lloyd Wright.

Among the many persons that share the credit for the development of this venture are the sponsors, Joseph Gerla & Charles S. Freeman, Gerard and Leonard Oestreicher, and Francis J. Kleban; the real estate broker, Peter Grimm of Wm. A. White & Sons; and the architects, Emery Roth & Sons, who made the architectural translation of the financiers' wishes.

Progress photo, looking southwest along Park Avenue, shows new office structure as it appeared about the middle of February. Building is expected to be ready for occupancy late this month.

Photo: Gottscho-Schleisner

addition and redecoration: new life for a small house

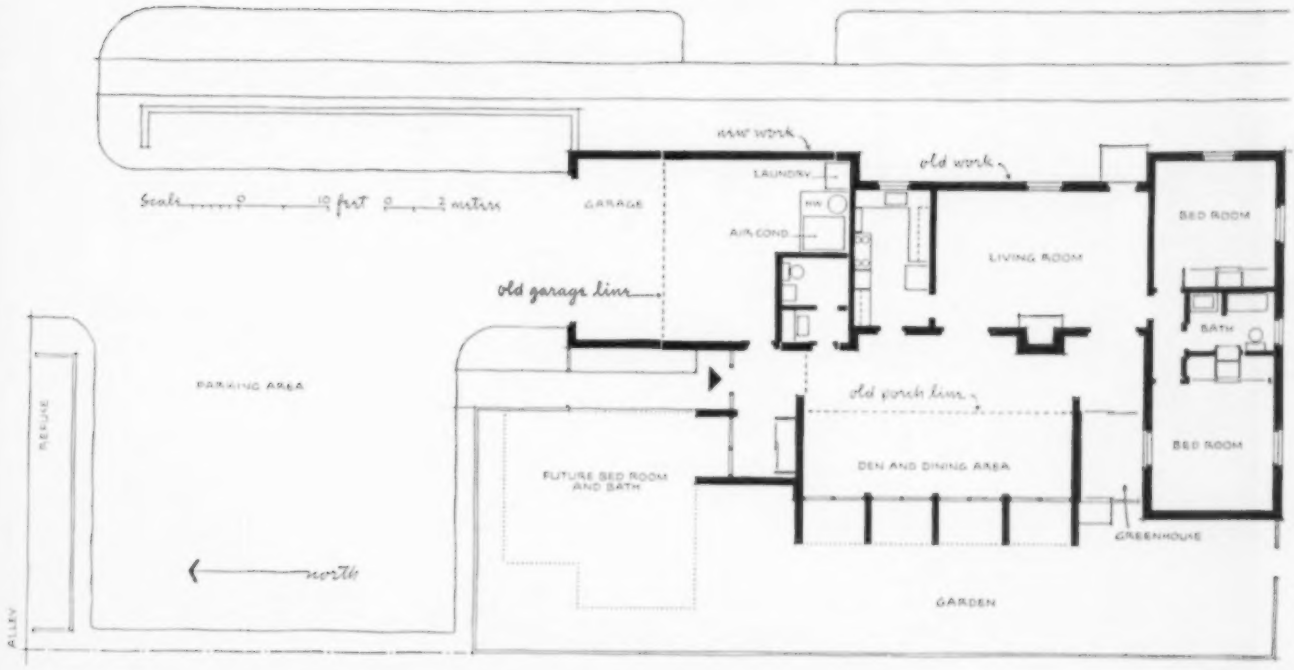
location	Dallas, Texas
architect	A. B. Swank
associate	E. G. Hamilton
general contractor	Porth & McCloskey

As our cities grow more crowded and home-building sites close to business areas become scarce and expensive, more and more existing houses are being remodeled, enlarged, and redecorated to bring them up to modern tastes and requirements. Indeed, the remodeled house is one of the most common examples of P/A's theme this month: *New Demands on Old Buildings.*

Common as it is, however, architects do not count it an important part of their practices financially, for very few of these jobs find their way to the architect's boards. Nevertheless, when an architect does remodel a house, it is often interesting and fun for everyone —client, architect, editor, and public. Here is one such job by A. B. Swank, in Dallas.

This house was too small to begin with, even for a family that needed only two bedrooms. The living room, which is much too near the street, served as a corridor between the bedrooms and the kitchen. Also, the main entrance opened abruptly into it from the nearby street. The garage opened directly onto the narrow street and created a real driving hazard. On the west side, the porch was rendered practically useless by the hot summer sun and the lack of privacy.

The architect first relieved the constriction at the center of the house by adding a large glassed-in dining room where the porch had been. This is shielded from the sun by wide overhangs and vertical fins. The garage was enlarged and given a new entrance on the lot, not the street, and parking space also was provided on the lot. Finally, for privacy, a wooden fence was built to enclose the back yard.


new work
old work
LAUNDRY
HW
AIR COND.
GARAGE
Scale 0 10 feet 0 3 meters
old garage line
LIVING ROOM
BED ROOM
BATH
BED ROOM
PARKING AREA
REFUSE
old porch line
DEN AND DINING AREA
FUTURE BED ROOM AND BATH
GREENHOUSE
north
GARDEN
ALLEY

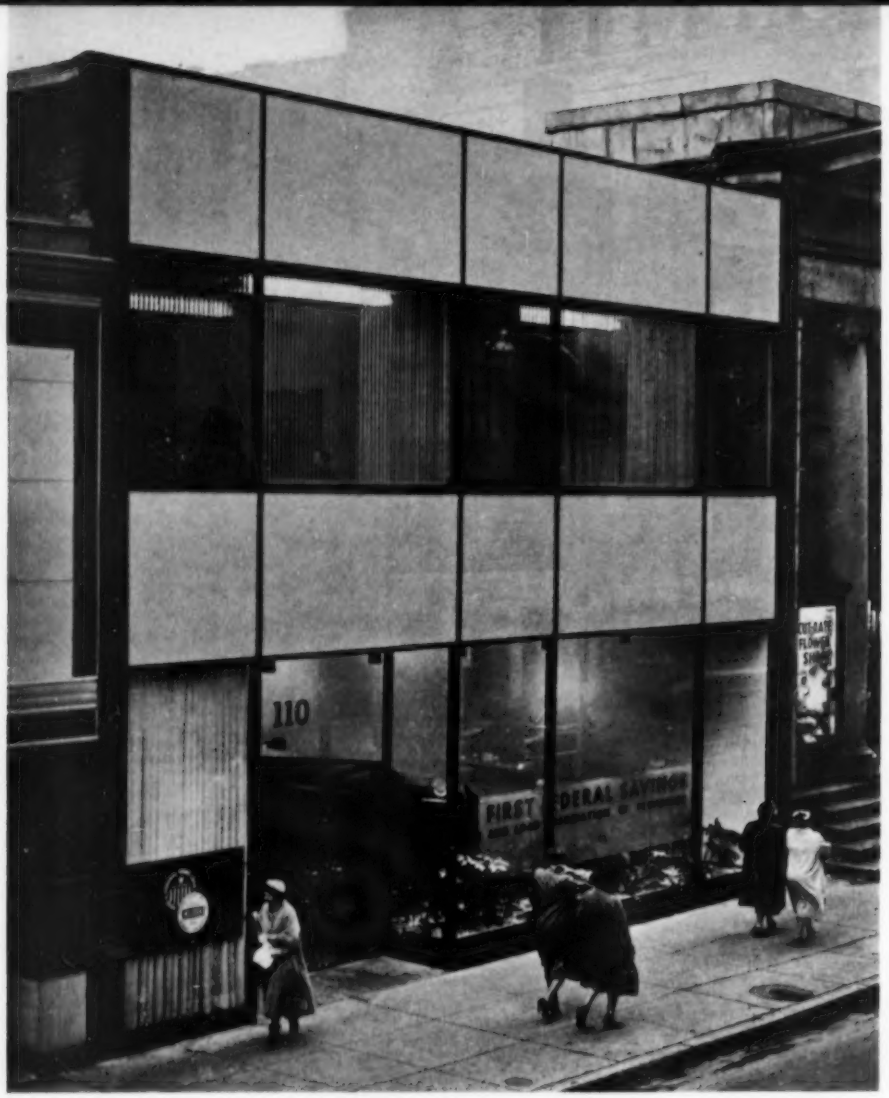
In addition to enlarging the house, the architect was also asked to redecorate throughout. Cork floor and well-designed furniture in new dining room (above and left) *give this addition the touch it deserves. Wood fence which encloses back yard can be seen through glass panels and brick fins.*

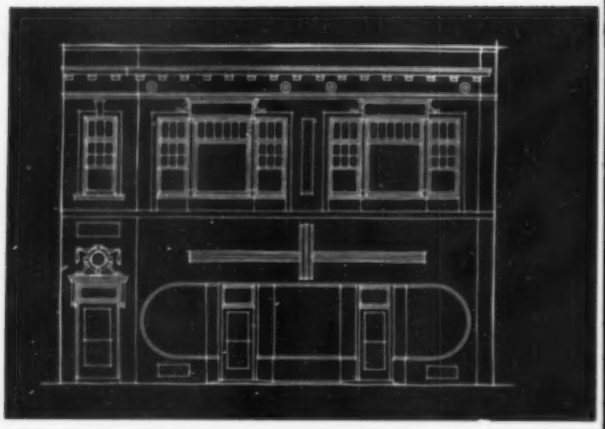
Photos: Ulric Meisel

Glass-covered entry (above) *from back yard is a greenhouse in winter, but is shaded by willow tree in summer.*

Kitchen (right) *was completely done over with new cabinets, equipment, linoleum, and lighting fixtures.*

Suspended lighting panel in living room (below) *was added, as well as wood paneling on wall next to kitchen. Louvered doors at the right side shut off street from this area; before, the living room was practically in the street. All furniture is new.*



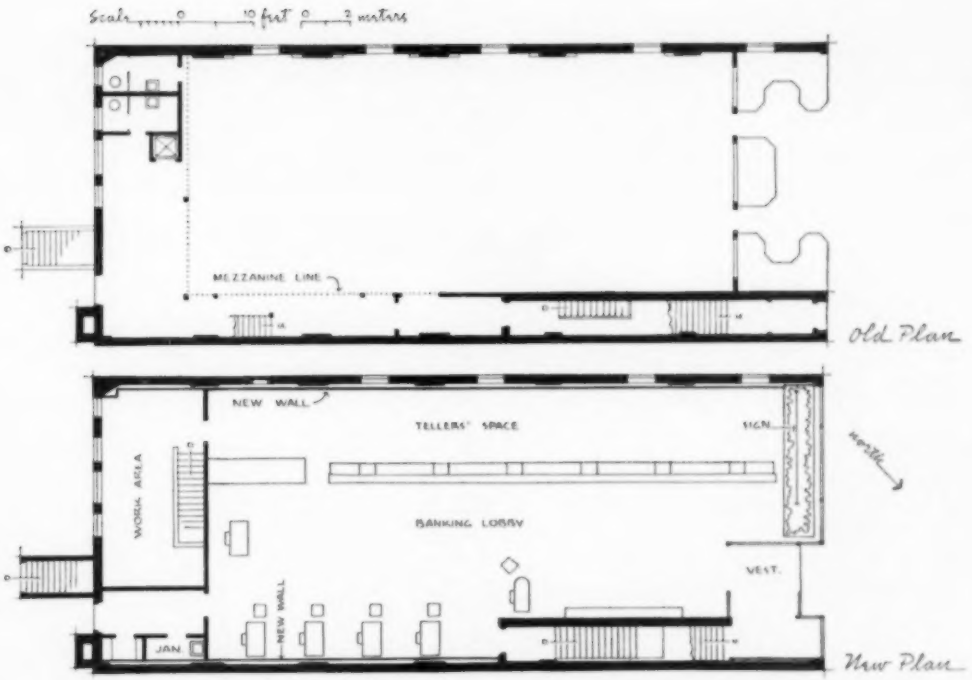


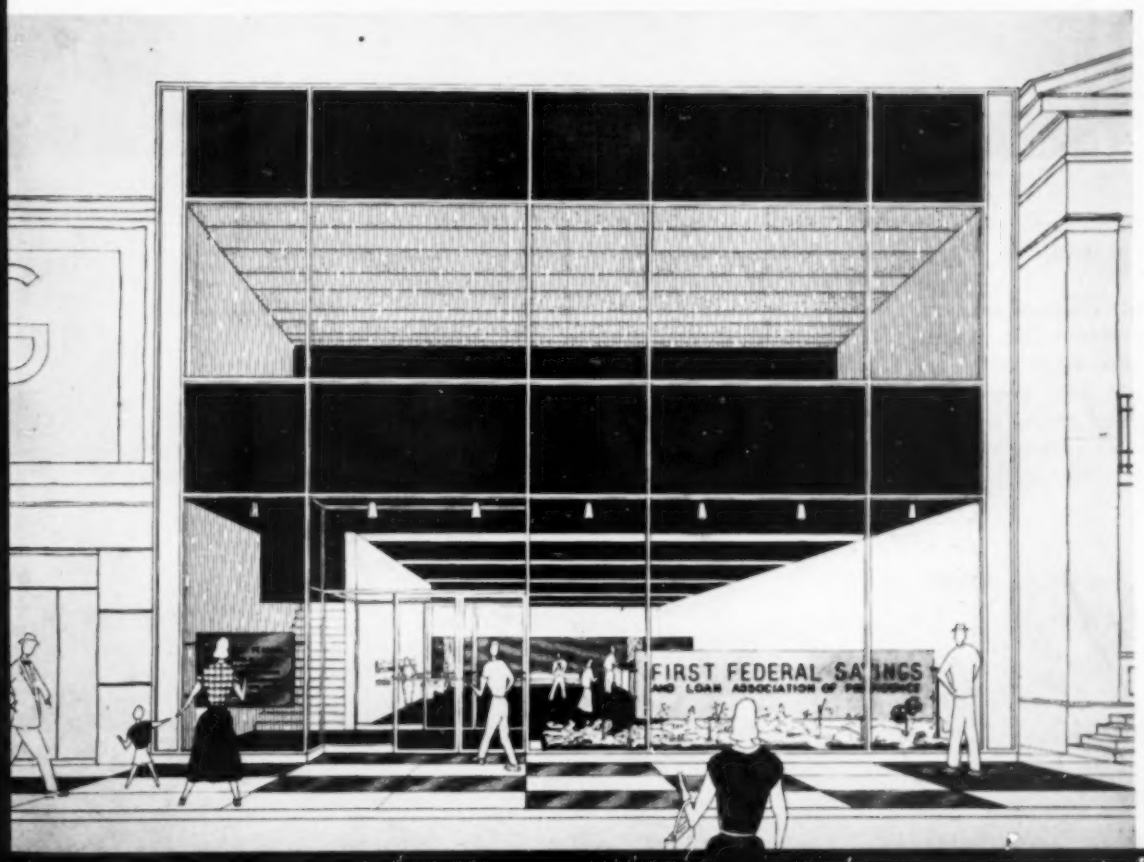
location	Providence, Rhode Island
architects	Cull & Robinson, Conrad E. Green
electrical engineer	John W. King
landscape architect	James D. Graham
general contractor	Frank W. Gustafson & Sons, Inc.

remodeling: financial institution from old shoe store

The first floor of this old building on Providence's cluttered Westminster Street was occupied for more than a decade by a shoe store, while the second floor was rented as office space. Last year, both floors were taken over by the First Federal Savings and Loan Association, and Architects Cull & Robinson and Conrad E. Green remodeled it for this firm.

Within a limited budget, it was not possible to do a complete remodeling job at once. The façade was replaced with transparent and opaque glass. (*bottom and acrosspage bottom*), and the entrance and display window were radically changed (*plans below*). A glass-



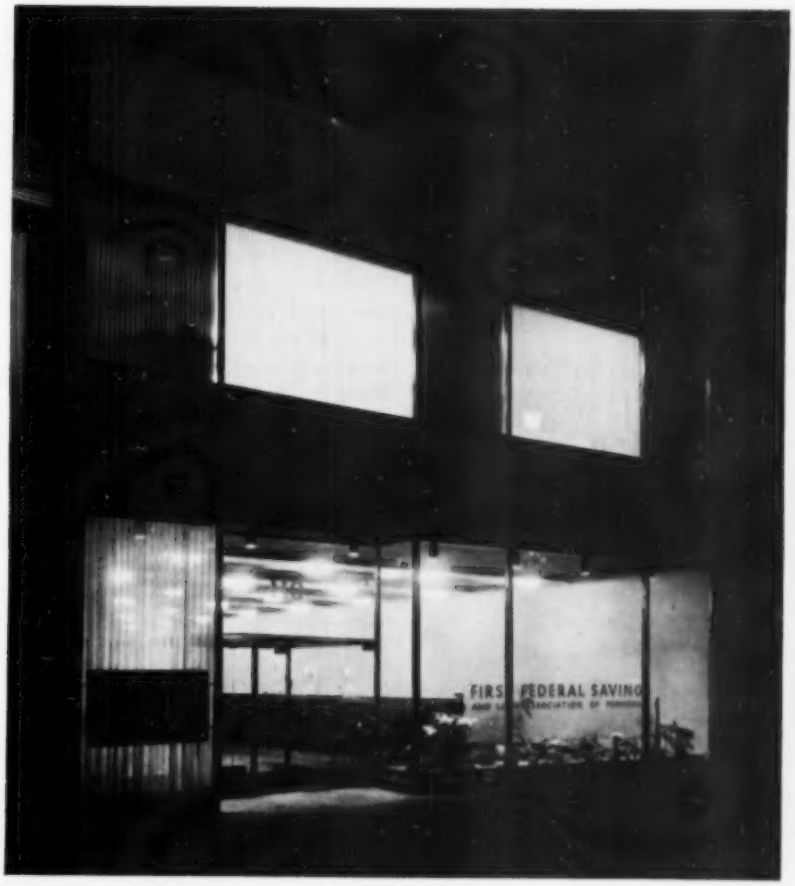


enclosed foyer (*acrosspage*) was used to temper blasts of outside air in summer or winter.

Since a bank does not sell merchandise, the display window contains only a frosted glass sign, which also serves as a baffle for the teller area inside. Plants also are used around the sign, to make the entrance more inviting.

The outstanding remnants from the former store are the ceiling lights, which the architects say make the interior a little "nervous," but since the rest of the building is so calm and restful, no great harm is done. Note how much quieter and more elegant the new façade is, compared with the Greek temple next door.

The basement was turned into a lounge, but nothing was done to the second floor, since it is still used for offices.



Large glass areas present no psychological obstacle to those entering building. No sunshades are required, as building faces north.

One result of the all-glass façade is a great amount of street reflection, which is evident in the daytime photograph.

Photos: Walter M. Arnold

alteration:

New York's Barbizon-Plaza Hotel has for years been known as a Central Park South hotel. Many of its rooms overlook Central Park, yet, until recently, its main entrance was on 58th Street, not on Central Park South (59th Street). Since the Barbizon-Plaza was completed, in 1930, 58th Street has become cramped, noisy, and unattractive; it was therefore decided to build another entrance to the hotel on Central Park South. This involved much more than putting a doorway where a wall had been, however, because the Barbizon Room —a 15-ft-high banquet room—occupied that end of the ground floor, and the hotel did not care to sacrifice any of its revenue for another entrance. As a result of clever engineering, the hotel got its new entrance on Central Park South without forfeiting any floor space in the Barbizon Room.

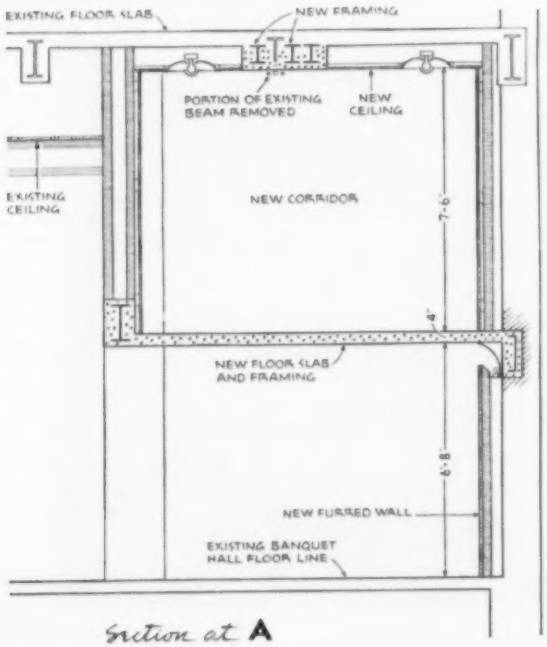
Architect Sydney Goldstone found that, if a four-in. concrete slab floor were poured 6′ 8″ from the Barbizon Room floor at the east end of the room, there would be enough head room beneath the slab for an alcove. But this would leave only a bare seven ft for the height of the corridor which would be an undesired minimum for its length.

However, by burning off the bottom flanges of the existing ceiling I-beams, along with several inches of web, and welding on steel plates of larger cross sections for bottom flanges (*acrosspage, top*), the architect insured that the beams would have the same strength while supplying the corridor an extra six to nine inches in height.

Bracing beams, running in the same direction as the corridor and joined to the cross beams, were reduced in depth and shallow sections added (*below*).

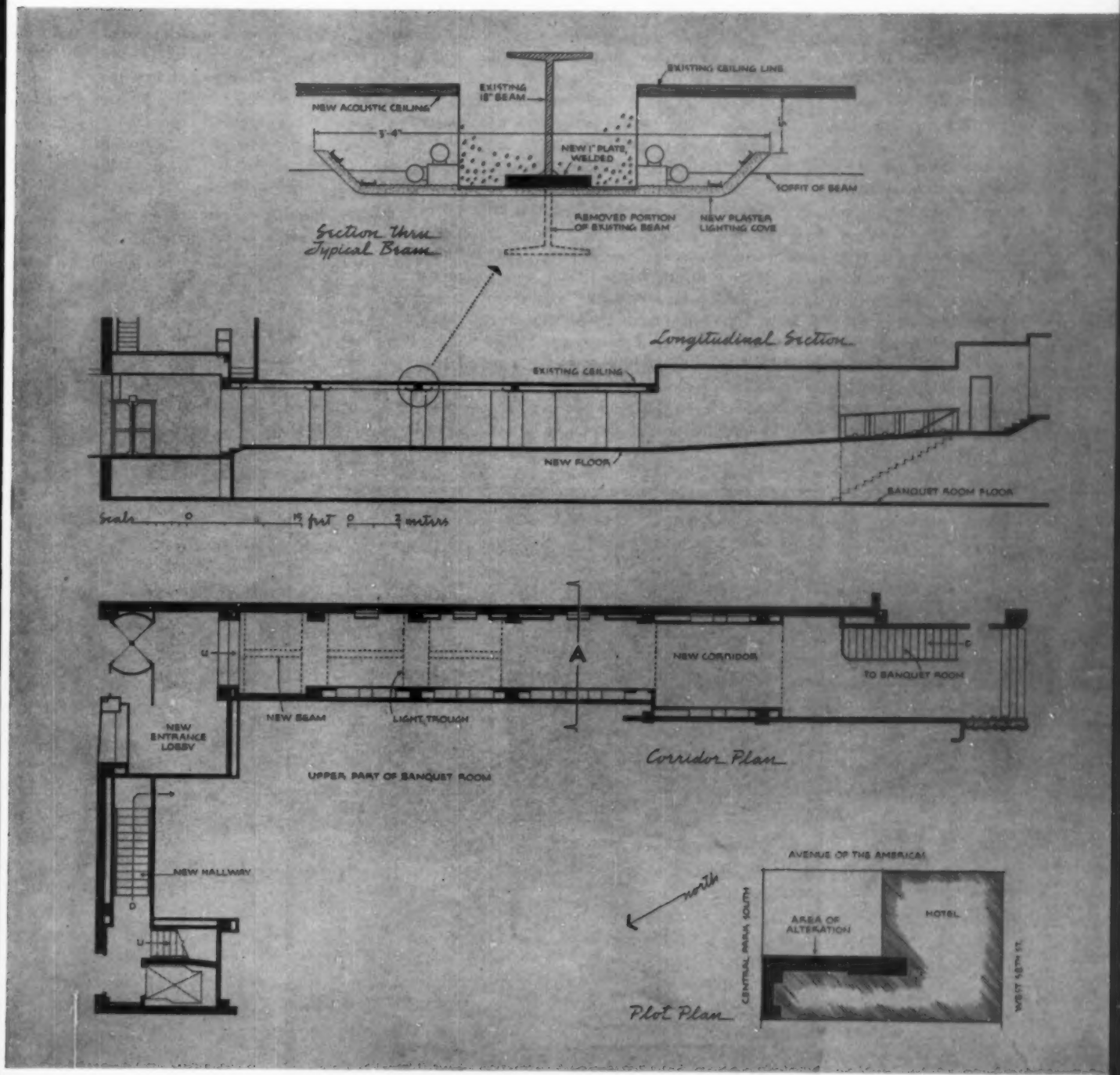
Finally, in order to bring the corridor level up to the lobby level, the floor slab was inclined slightly at the south end (*acrosspage, section*). Here the ceiling height is greater and no head-room problem was encountered.

The walls of the corridor have been faced with travertine marble, and a red carpet covers the floor slab.



Section at A

Barbizon-Plaza

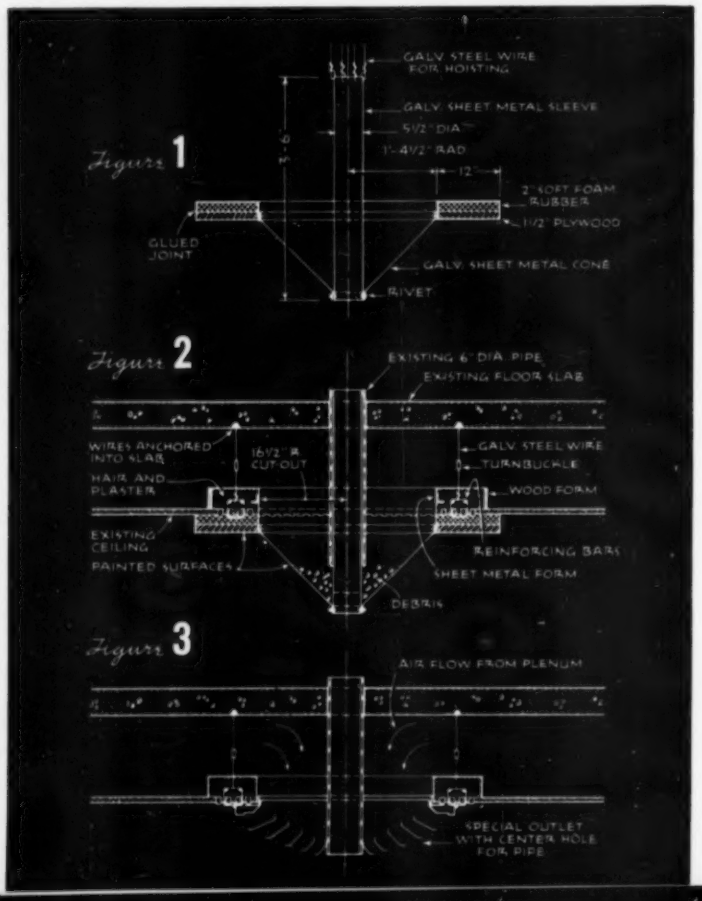


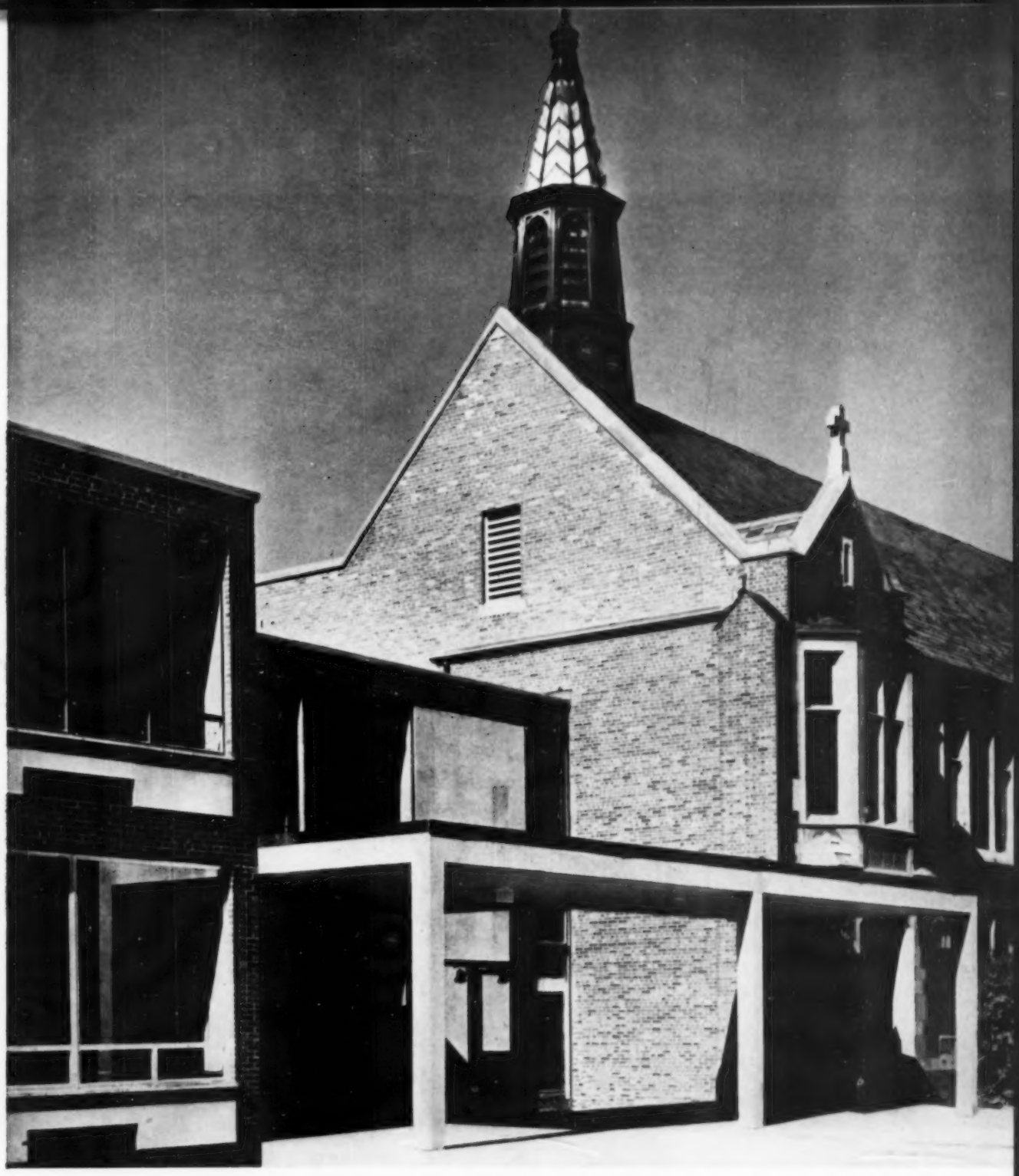
alteration: Waldorf-Astoria

In order to improve the air-conditioning system within the Waldorf-Astoria's Main Ball Room (New York City), it recently became necessary to install a circular diffusor with a 5′ diameter in the center of the 42′ high ceiling. The unusual problem which had to be overcome in installing the outlet was the hotel management's requirement that the use of the room could not be interrupted in any way. This limitation made it impossible to erect any scaffolding or to interfere with a 6″ pipe (extending down through the ceiling) through which decorations for various functions in the Ball Room are hoisted into position. Suspended to form a plenum below the ceiling slab, the room's highly decorated false ceiling includes open-plaster grillwork. Thus, a further problem presented itself: in providing space for the outlet, cutting had to be done in such a way that there would be no danger of the ceiling collapsing.

These specific installation problems were overcome by the use of a sheet-metal cone (*Figure 1*) devised by E. B. J. Roos, Associate of Seelye, Stevenson, Value & Knecht, New York Engineers. A sheet-metal sleeve to which this cone was attached was drawn up through the existing hoisting pipe so that a wooden ring, already fastened to the cone's edge and covered with a 2″ layer of foam rubber, rested firmly against the underside of the ceiling. For appearances' sake during alteration, both cone and ring were covered with a coat of gold paint.

At this stage two circular forms were placed directly over the foam rubber and two curved reinforcing bars, laid inside these forms, were wired to each piece of the ceiling's open plaster work (*Figure 2*). Plaster was then poured into the forms and forced down into the plaster grillwork. When the plaster had solidified and the forms were removed, a reinforced-plaster ring was thus left which would provide a strong support for the outside edge of the projected opening. The new opening was then cut in the ceiling to the inside diameter of both the plaster and wooden rings—the debris simply falling into the sheet-metal cone. After all cutting away had been completed, it was necessary only to lower the cone, hoist up the outlet, and secure the outlet to the reinforced plaster ring (*Figure 3*).



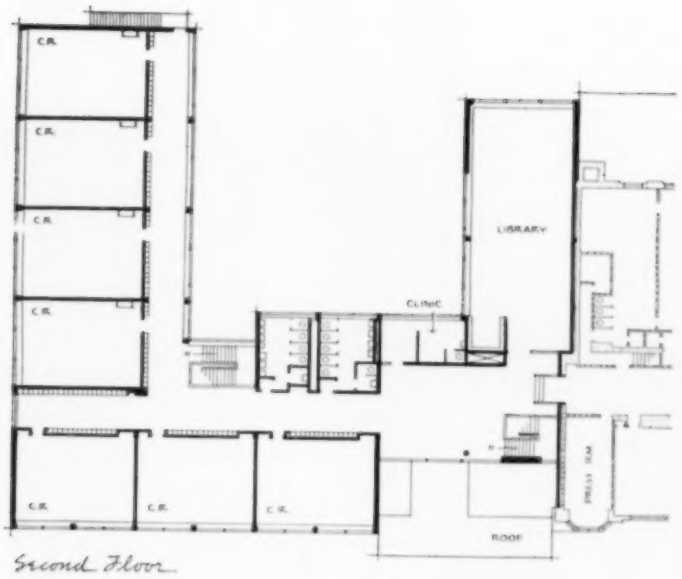


addition: elementary classrooms for a parochial school

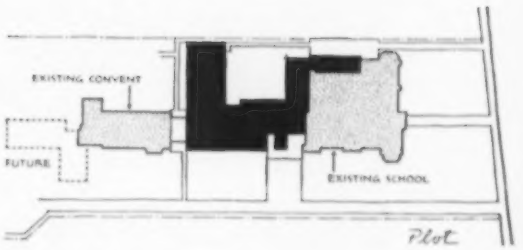
location	Grosse Pointe Farms, Michigan
architects	Leinweber, Yamasaki & Hellmuth
engineers	H. E. Beyster & Associates
consulting engineer	H. L. Walton
general contractor	W. E. Wood Company

The problem here was that a greatly increased elementary-school population had outstripped the facilities of an existing parochial school. The site available for a new 14-classroom unit was a space between two existing buildings about 140′ x 180′ in area, bounded on the north by a private drive and on the south by a primary grades playground that the authorities wished to preserve. Not the least of the design difficulties was that the existing building, to which the new unit would be joined, was approximately Tudor Gothic, and an expressed wish was to have the new building "blend in" with the old.

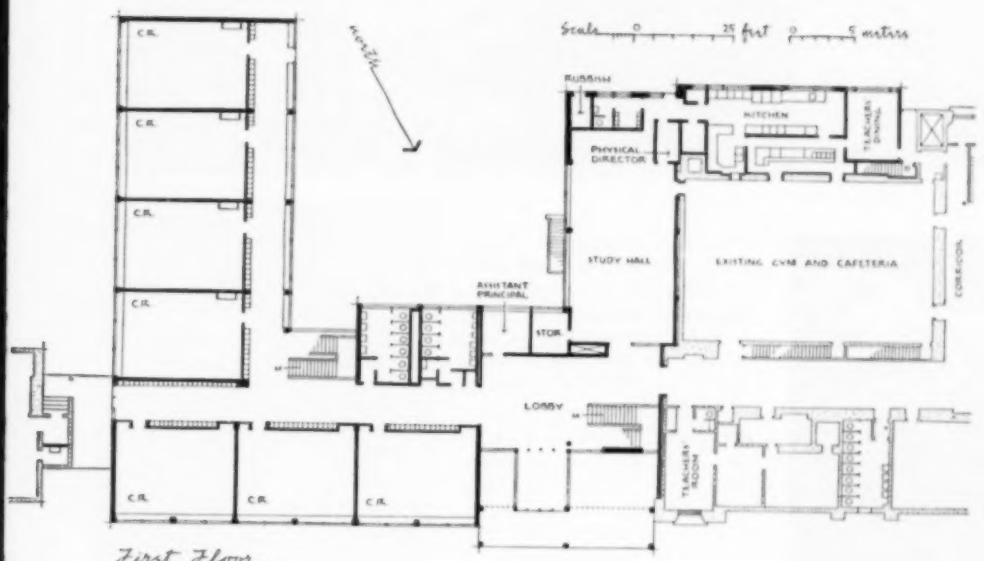
The solution is a two-story building, organized around the play-yard. On each floor of the north unit, in addition to a stair lobby, there are three classrooms, with windows lining their long, north walls. On the east side of the east wing (again, on each floor) are four more classrooms, aligned so that one of the shorter walls is the window wall. In the west wing, on the ground floor, are a study room, a new kitchen, and serving facilities for an existing gym-cafeteria in the old school building. Upstairs, above the study hall, is the new school library. Ingredients in "blending" the new with the old included use of matching face brick and limestone sills and panels.



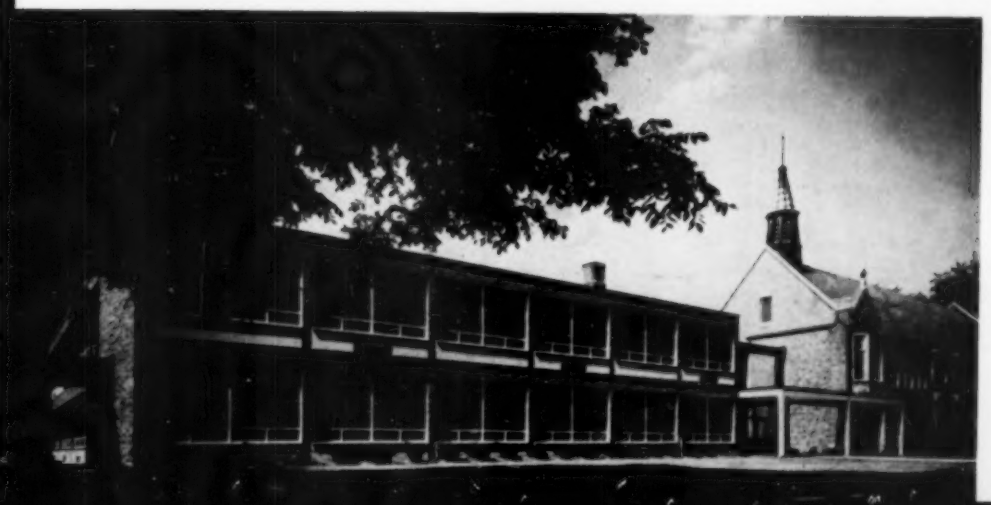
Second Floor

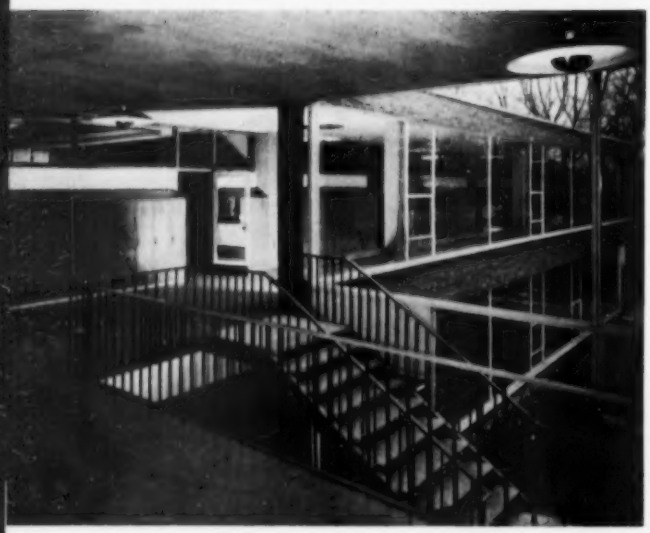


Plot



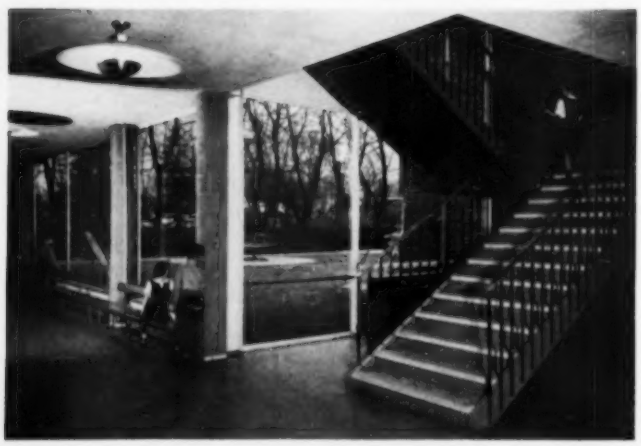
First Floor





Window walls along the west face of the east wing (above and left) *light the corridors and—by means of clear panels above coat lockers—bring crosslighting to each classroom.*

At the intersection of this corridor with the one serving the north unit is a freestanding staircase bordered by full-height glazing (left and below). *A similar staircase occurs in the lobby at the other end of the building.* Photos: Lens-Art



The building is framed of steel, with reinforced-concrete floor slabs over open-web steel joists. Exterior walls are of face brick over cinder block; limestone trim. The hollow-metal sash frames are painted white.

Floors throughout are surfaced with asphalt tile, and ceilings are finished with acoustical plaster. Surface-mounted fluorescent lights are the main source of artificial illumination, though dome lights occur in lobbies and corridors. Sunlight is controlled by venetian blinds. An oil-fired boiler serves a hot-water heating system employing both convectors and cast-iron tubular radiators. Direct radiation is supplemented with unit ventilators in classrooms and other major areas.

The library (above) *occupies the west wing of the second floor. Operable panels beneath the large areas of fixed glass on east and south walls provide natural ventilation.*

Typical classrooms (left *and* below) *have cinder block corridor and partition walls. In the corridors, clear panels of glass above lockers provide bilateral lighting.*

To The Owner and Architect—

TO THE OWNER'S EXACT NEEDS

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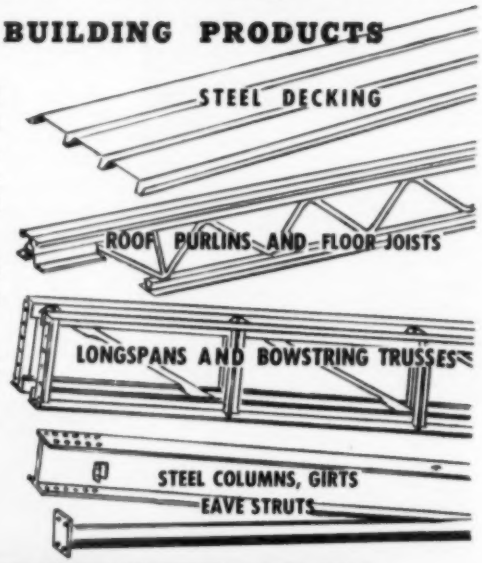

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• ENGINEERING • FABRICATING AND ERECTING •

by Ben John Small

spec small talk

accouchement

Here is the obstetrical news you have been waiting for. Highlights in the history of wet heating in America are written around a canal warehouse in Westfield, Massachusetts, and the men of ideas who labored there. By 1853 the warehouse had been turned into a foundry purchased by H. B. and Edwin Smith. As H. B. Smith & Company, these brothers made fine cored castings. In 1859, John R. Reed joined the company and with the Smith brothers started the development of central steam heating using radiators in all rooms. A test for their theories came when Samuel Gold offered them the patents for his cast-iron sectional boiler. The unit became the first commercially practical boiler of its type and signalled the birth of central wet heating. These men were soon joined by one of the real giants in heating history—John H. Mills. Now known as "the father of modern wet heating" his most distinguished contribution was the first practical cast-iron water tube boiler. Want to hear about my newly marketed electrically heated diapers?

tooth pix nix

Flash! The tooth pick industry has received a severe blow. American-Olean Tile Company is offering "self-spacing" cushion edge tiles. These tiles have small projections on each edge designed to provide straight, even joints and uniform grout lines.

don't disregard the obvious

It is perfectly amazing how often the obvious with respect to construction economies has to be repeated. I am thinking of the good advice offered by the State of New York Commission on School Buildings to those who plan and build schools. Regarding drawings and specifications they say:

1. Have plans and specifications which are complete and definite to enable contractors to prepare cost estimates quickly and accurately.

2. Write specifications so that acceptable competitive materials may be used where qualities and characteristics of respective materials are comparable.

3. Do not make the specifications too restrictive and complicated. Some contractors do not have suppliers who can provide the exact item so they may be required to buy that item on the open market at a higher price.

4. Keep the number of alternates at a reasonable minimum and make certain that each alternate is clearly described so that there will be no misunderstanding on the part of the contractor as to what is intended.

5. When practicable, have the alternate bids submitted on increasing the size or improving the quality of the school rather than on cutting down the standards in the basic bid.

On the subject of advertising for bids, they say:

1. Advertise for bids, if practicable, when building activity is at a low ebb and building contractors are eager for work.

2. Advertise for bids, if practicable, in late fall or winter or early spring when many contractors are out of work. It is then early enough in the year to get the building under roof so that work may proceed without interruption, and to avoid excessive expense for heating the following winter.

3. Advertise for a sufficient time to enable builders to obtain dependable bids from subcontractors and suppliers, ordinarily not less than three or four weeks.

4. Advertise for bids to be opened at a time when bids are not being received for other important projects.

5. Do not advertise unless the work can be started within a reasonable time from the date of award.

6. Allow a reasonable amount of time to complete the project.

7. Exercise care in the selection of a builder, as to his personal responsibility and experience, and as to his ability to complete his contract with the board.

trade names

By this time, you probably know that in a recent contest Libbey-Owens-Ford Glass Company selected "Parallel-O-Plate" as a name for its new twin-ground plate glass. This tangy mouthful set me thinking about proprietary names in general. The ones I am least likely to remember because of their contrived spellings are *Vizabledg* (safety treads), *Staeze-Clene* (paint), *Likwidvalv* (soap dispensers), *Kuver-Krak* (wallboard), and so help me, *Klampswitchfuz* (switchboards). Without my slide rule, I would be lost with *Ten-Twenty* (classroom chairs), *Twenty-Twenty* (lighting fixtures), *One-Eleven* (plywood), *Straight-8* (wardrobes), *Fourcault* (glass sheet), *4-Way* (steel plate), *One-Der* (door frames), and *Forty-Sixty* (lighting fixtures). In the whimsical category, I offer *Carmen* (water closets), *Adamantine* (prison locks), *Ar-Ke-Tex* (ceramic tile), *Chore Boy* (incinerators), *Nixalite* (bird spatter stopper), *Flamebuster* (sprinkler nozzle), and *Scruin* (anchoring devices). Nutz!

inflation

I may be telling tales out of school but I feel it my professional duty to report that the fee schedule of Alexander Jackson Davis, a New York architect, appears in print as follows:

For full professional services	5 percent
Set of drawings and specifications	1 percent
Drawings separately (medium class of buildings)	
Principal floor plan	$15.00
Upper floor plans	5.00
Elevations of principal front	15.00
Specifications	15.00
Section showing interior	10.00

On the other hand, let's forget it. I am no informer. Besides, this was in 1850. Davis, Walter, and Strickland met in 1836 to found the AIA which really got started some 20 years later. For those who like to sniff at trends, I offer the fact that a free lance specification writer of my acquaintance charges $15 per hour. How times have changed, m'boy.

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CLEAN, SIMPLE STYLING—NO FRILLS—NO PROJECTING PARTS

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EASY TO CLEAN—sliding sash removes into room for convenient indoor washing.

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SAFE—positive, tamper-proof locking in closed position and in three ventilating positions.

50 STANDARD SIZES: All designs and sizes popularly specified for residential, commercial and monumental buildings supplied promptly. Standard windows up to six-foot height are available. Write for information on special sizes.

CONSTRUCTED OF sturdy, hollow-type aluminum extrusions —63-S-T5 alloy, minimum thickness .062"—engineered for maximum strength.

● **PETERSON SETS THE PACE in the trend to aluminum windows. Peterson styling, advanced engineering and horizontal-slide operation are without equal. Thousands of installations coast to coast.**

Write for Literature and Name of Nearest Dealer

●

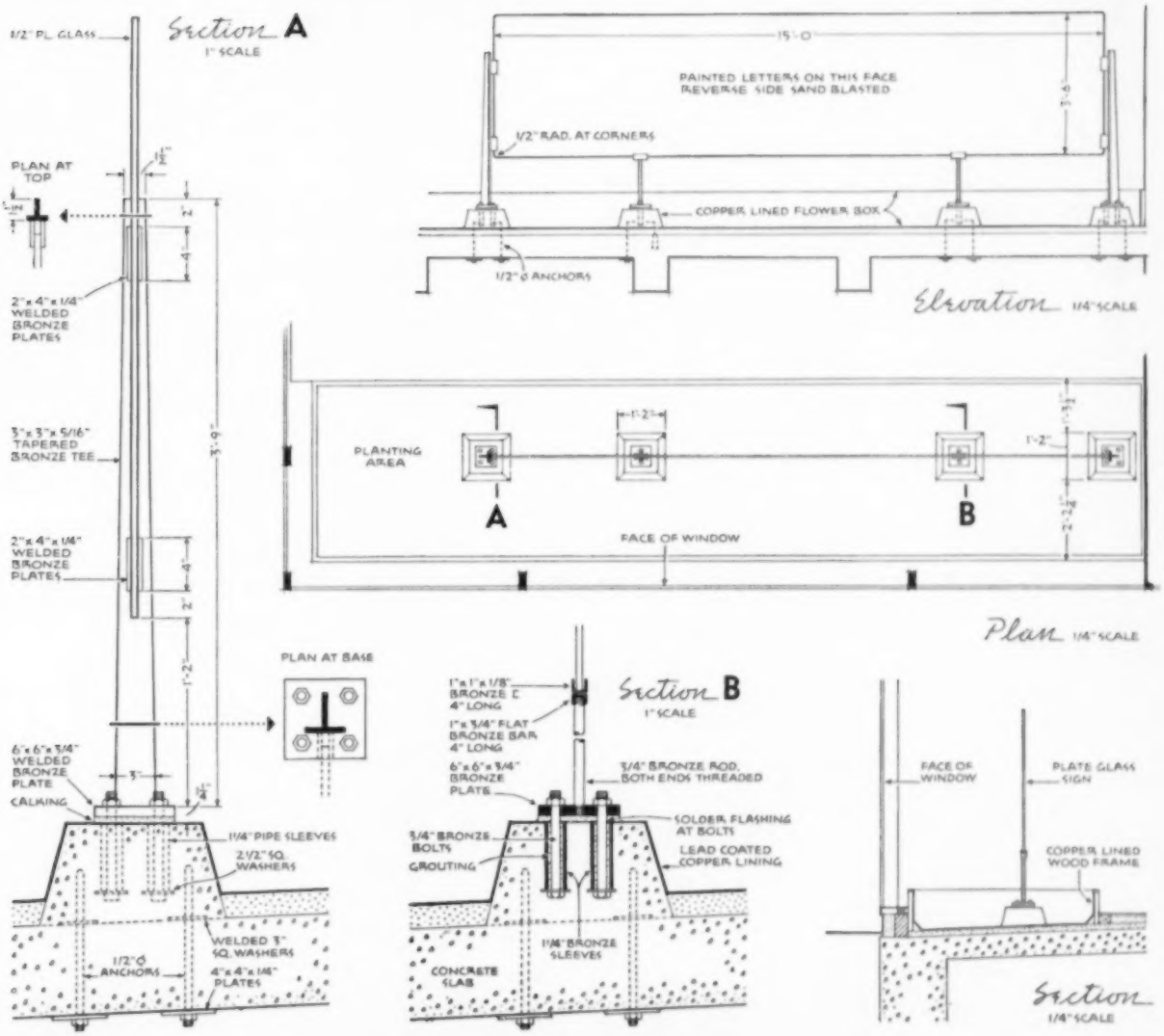
Inquiries From Interested Dealers Are Invited

PETERSON WINDOW CORPORATION

1385 E. Eight Mile Road • Ferndale 20, Michigan

bank: indoor sign

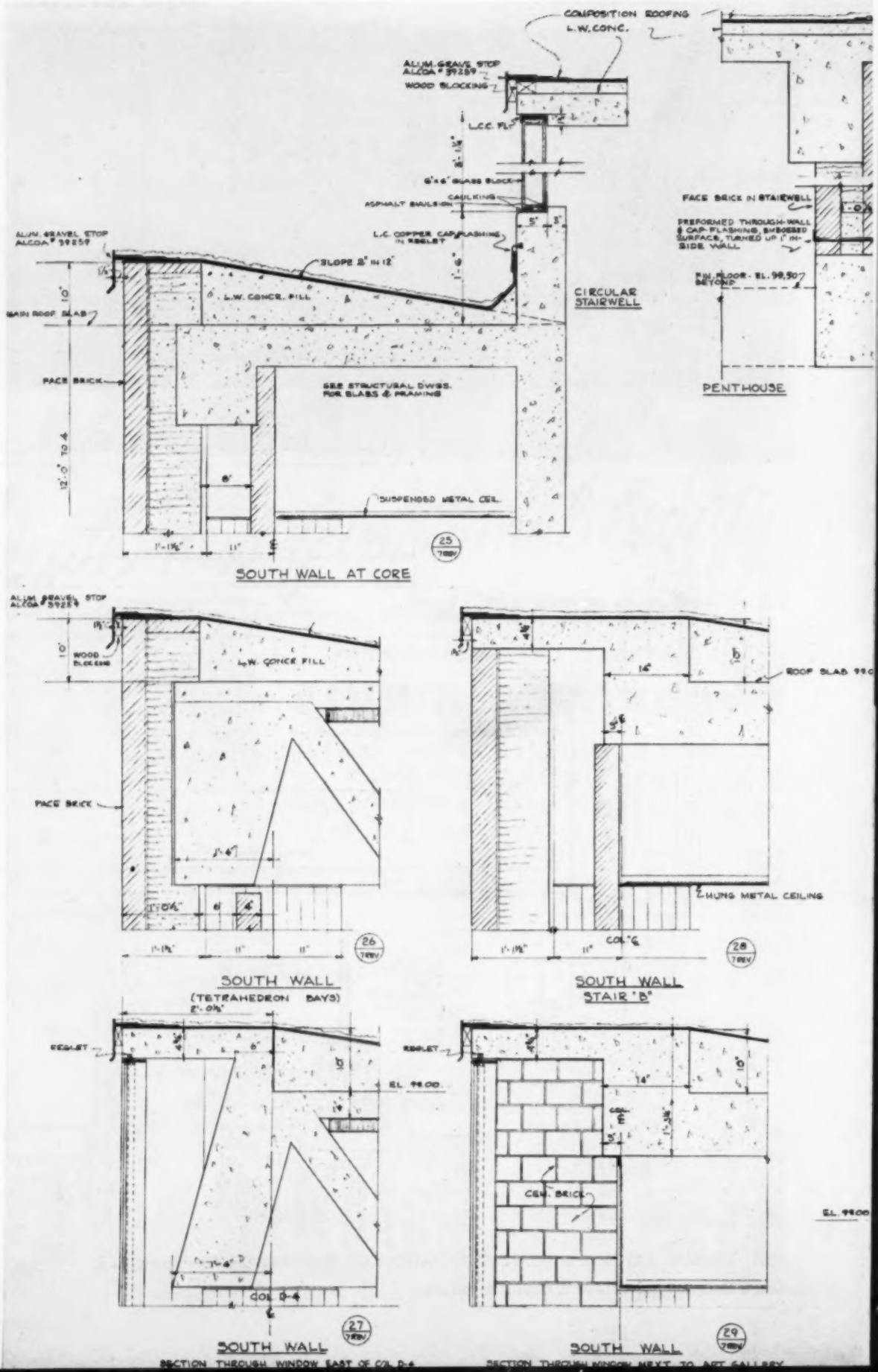
WALTER M. ARNOLD

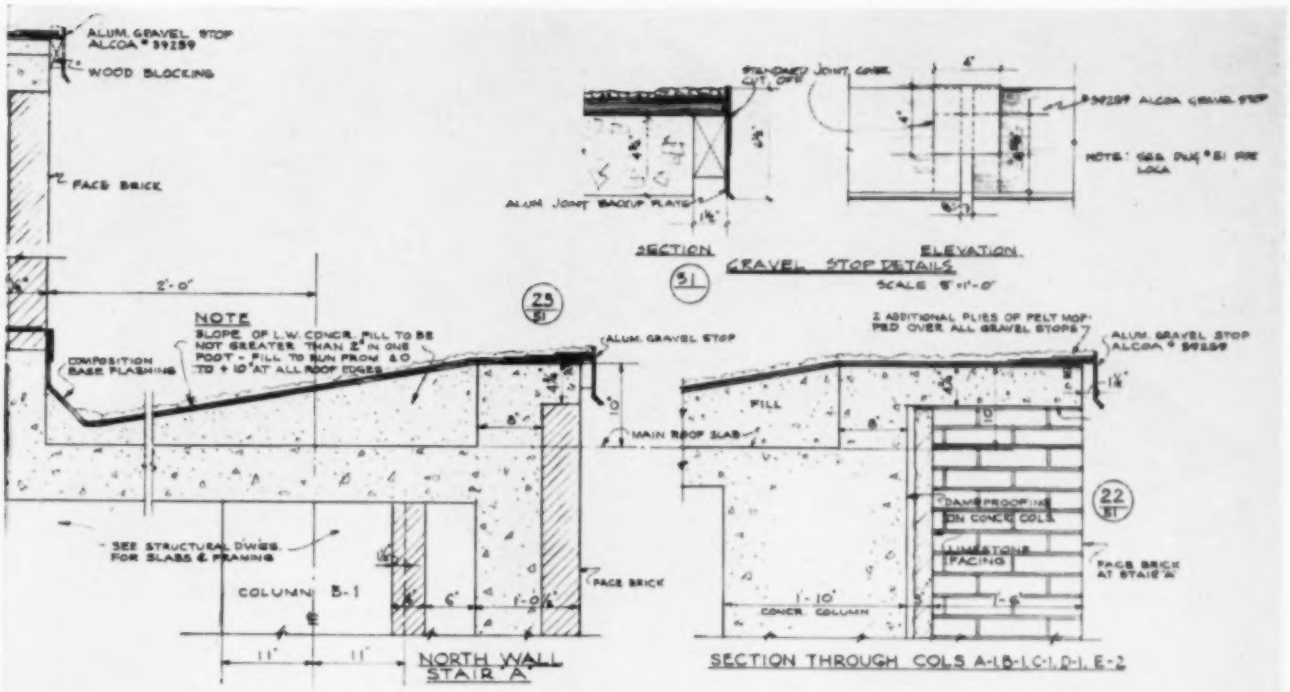


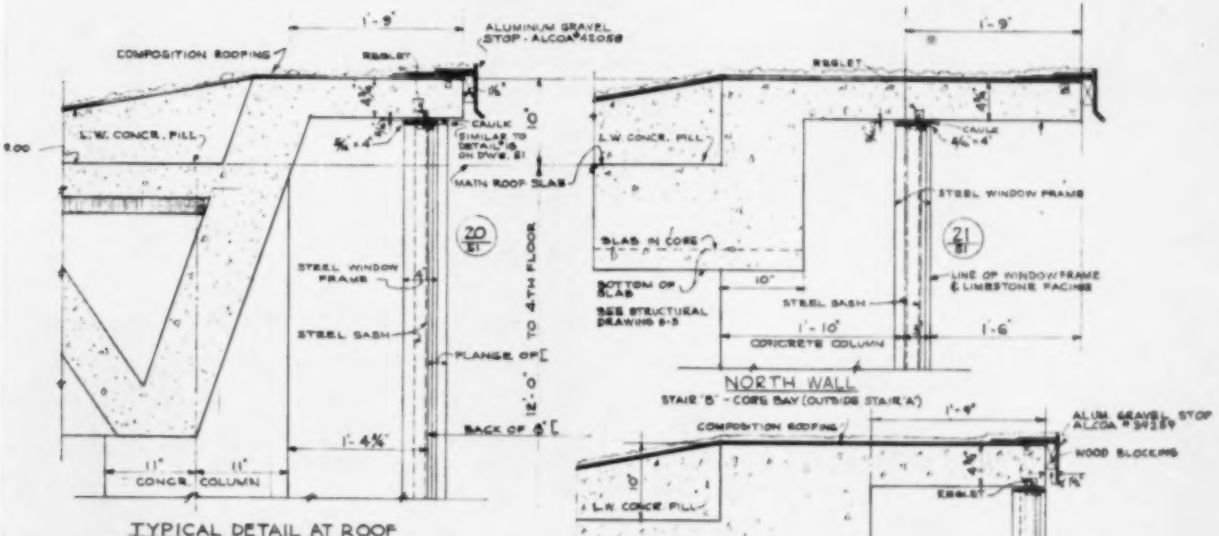
FIRST FEDERAL SAVINGS & LOAN ASSOCIATION OF PROVIDENCE, Providence, R. I.

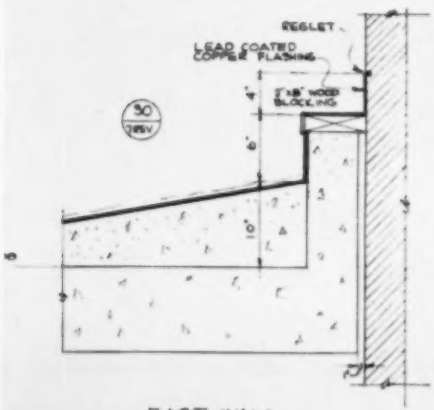
Cull & Robinson and Conrad E. Green, Architects

roof details: Yale Art Gallery and Design Center, New Haven, Conn.




ALUM. GRAVEL STOP ALCOA # 59259
WOOD BLOCKING
FACE BRICK
ALUM. JOINT BACKUP PLATE
SECTION
ELEVATION
GRAVEL STOP DETAILS
SCALE 6"=1'-0"
NOTE
SLOPE OF L.W. CONCR. FILL TO BE NOT GREATER THAN 2" IN ONE FOOT - FILL TO RUN FROM 0 TO + 10" AT ALL ROOF FORCE
COMPOSITION BASE FLASHING
ALUM. GRAVEL STOP
2 ADDITIONAL PLIES OF FELT MOP FIELD OVER ALL GRAVEL STOPS
SEE STRUCTURAL DWGS. FOR SLABS & FRAMING
COLUMN B-1
FACE BRICK
MAIN ROOF SLAB
FILL
DAMPROOFING ON CONCR. COLS.
LIMESTONE FACING
FACE BRICK AT STAIR 'A'
CONCR. COLUMN
NORTH WALL STAIR A
SECTION THROUGH COLS A-1 B-1 C-1, D-1, E-2


COMPOSITION ROOFING
REGLET
ALUMINUM GRAVEL STOP - ALCOA #42058
L.W. CONCR. FILL
CAULK
SIMILAR TO DETAIL 6 ON DWG. S1
MAIN ROOF SLAB
STEEL WINDOW FRAME
STEEL SASH
PLANGE OF
BACK OF
TO 4TH FLOOR
CONCR. COLUMN
TYPICAL DETAIL AT ROOF
NORTH ELEVATION BETWEEN COLUMNS A-1 & B-1; C-1 & D-1; D-2 & E-2.
SLAB IN CORE
BOTTOM OF SLAB
SEE STRUCTURAL DRAWING S-5
CONCRETE COLUMN
LINE OF WINDOW FRAME & LIMESTONE FACING
NORTH WALL
STAIR 'B' - CORE BAY (OUTSIDE STAIR 'A')
ALUM. GRAVEL STOP ALCOA # 59259
WOOD BLOCKING
L.W. CONCR. FILL
FACE OF COLUMN
EAST AND WEST WALLS
BETWEEN COLS D-1 & D-2, D-4 & D-5, A-1 & A-5



ROOF DETAILS

YALE UNIVERSITY
DESIGN LABORATORY
YORK AND CHAPEL STREETS - NEW HAVEN, CONNECTICUT

DOUGLAS ORR - LOUIS I. KAHN
ASSOCIATED ARCHITECTS
232 WINCHESTER AVENUE, NEW HAVEN, CONNECTICUT

24 NOV 1959
5 DEC 59
23 OCT 59
DRAWN BY L.W. - E.P.C.
SCALE 1½"=1'-0"
S7

Home Savings & Loan Association, Dayton, Ohio; Architects—Geyer & Neuffer, Dayton; Formica Fixtures—Backus Brothers, Cincinnati

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See Sweets $\frac{13a}{FO}$ for additional Formica facts.

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Pays in Performance

Guaranteed by Good Housekeeping

Seeing is believing. If this wash-off identification is not on the product, it's not FORMICA.

before alteration. *Area used as hallway between kitchen and living room.*

Page Beauchamp

remodeling

Interior design becomes all-important in a remodeling or alteration project. In most cases, the space to be worked with is already determined and the design problem is one of rearranging (physically or visually) to meet new requirements and new uses of the area. The nature of the alteration—and the degree of obsolescence of the building—will determine whether existing elements must be kept, perhaps masked or altered; or whether partitions and even walls can be removed, whether doors and windows can be relocated.

Examples of successful interiors as a result of alteration are many. There are many devices available to the designer, and a number of materials with which to work. Control of light, in itself, can influence the useability as well as the appearance of interior space. When color, in addition, is manipulated well, the range of design possibilities is widened. The use of room dividers not of ceiling height, replacing existing partitions, can do much to change the appearance of space, and its scale, to meet new needs. Suspended ceilings, or partially suspended "floating" ceiling areas can also create illusions of dimensions different from the actual ones. Irregular existing space can be cleaned up and straightened out by built-in units or by masking, semistructural screens of translucent materials. The problem is almost always an interesting one; carefully considered simplification of existing confusion seems to be the keynote of success.

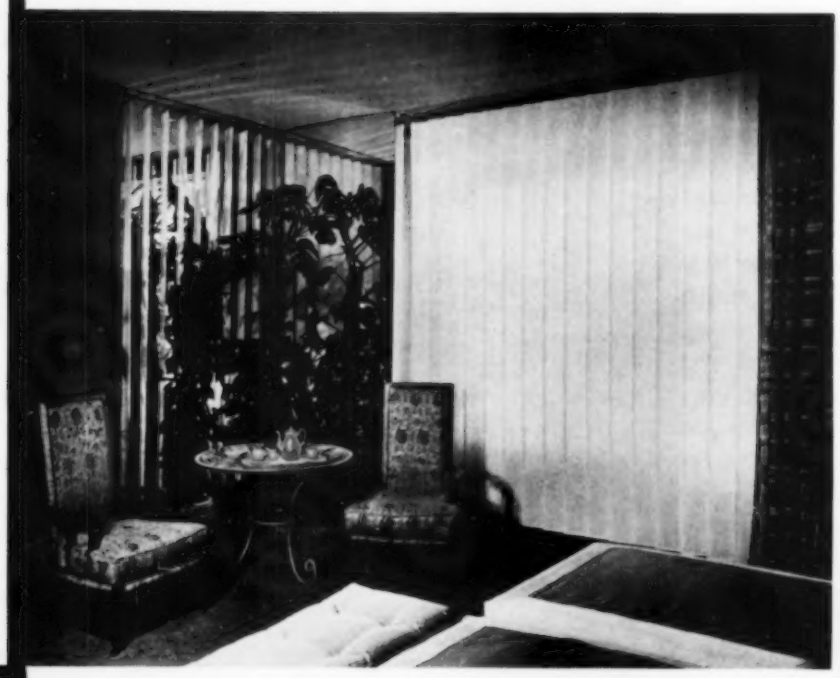
after alteration. *Hallway becomes dining area. Kim Hoffman, Stephen Heidrick, Interior Designers.*

remodeling

The most important consideration in the remodeling of this apartment was to achieve as much open space as possible, with a flow from one room to the other. To accomplish this, a five-foot opening was cut through, where the window wall joined the partition between the living room and bedroom. On the bedroom side, the window wall was mirrored to dramatize the openness. Elaborate plantings in both rooms, on either side of the opening, increase the vista. Vertical fabric louvers and ceiling-to-floor draperies accentuate the height of the rooms and the same window treatment is carried from one end of the apartment to the other. In the bedroom, the cane-paneled screen forms a backdrop for the bed and conceals an unsightly, poorly placed window. Each room has a masterful combination of old and new furnishings and subtle and brilliant hues. Color has been a carefully considered element, because daytime light is strong and evening light is softly subdued, principally from the pin-point ceiling fixtures.

Photos: Gottscho-Schleisner

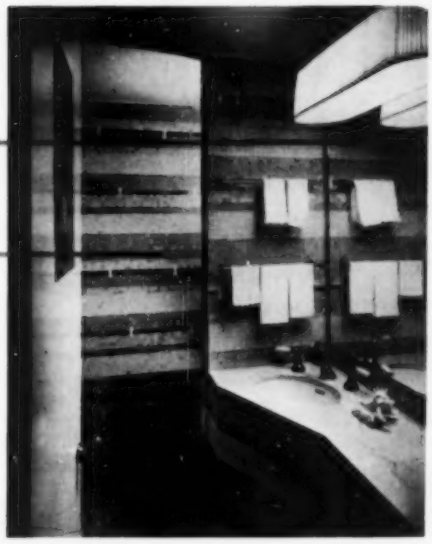
vertical fabric louvers



cane-paneled screen

mirror

mosaic tiles



data

cabinetwork

Cane-paneled Screen: designed by Harold Schwartz/ executed by Walter P. Sauer & Sons, 30-28 Star Ave., Long Island City, N. Y.

furnishings and fabrics

Sofas: #M896/ designed by Harold Schwartz/ Romweber Co., One Park Ave., New York, N. Y.

Chairs: M. Singer & Sons, 36 E. 19 St. New York, N. Y.

Marble Coffee Table: custom-designed by Harold Schwartz/ Italian imported black lacquer individual tables.

Curtains: Jack Lenor Larsen, 32 E. 22 St., New York, N. Y.

lighting

Pin-point Downlights: Century Lighting, Inc., 521 W. 43 St., New York, N. Y.

walls, ceiling, flooring

Walls: painted plaster; mosaic tile and travertine/ Cassavini Marble Co., North Bergen, N. J.

Ceiling: painted plaster.

Flooring: oak in herringbone pattern/ William J. Erbe & Sons, 323 E. 36 St., New York, N. Y.

location | apartment, New York, New York

interior designer | Harold Schwartz

remodeling

data

cabinetwork

Cabinets, Built-in Wardrobes, Desks, Tables: designed by Tom Lee, Ltd./ executed by Walter P. Sauer & Sons, 30-28 Star Ave., Long Island City, N. Y.

furnishings and fabrics

Sofa: #4907-A/ brass legs/ designed by Edward J. Wormley/ Dunbar Furniture Corporation of Indiana, Berne, Ind.

Ottomans: #5314/ upholstery, gunmetal leather/ Dunbar Furniture Corp.

Surfboard Table: #5220/ #14, dark finish/ Dunbar Furniture Corp.

Square Table: #4776/ 35½" square/ Dunbar Furniture Corp.

Desk Chairs: #4515 swivel/ Dunbar Furniture Corp.

Pull-up Chairs: #4173/ Dunbar Furniture Corp.

Chairs and Stools: (in showrooms) #901-A, #1985T/ JG Furniture Co., Inc., 102 Kane St., Brooklyn, N. Y.

Silk Casement Curtains: with "Lurex" colored yarns/ Haledon Silk Mills, Inc., 37 W. 39 St., New York, N. Y.

lighting

Crystal Chandelier: Greene Lighting Fixtures, Inc., 422 W. 42 St., New York, N. Y.

Pierced-Brass Hanging Fixtures: #1994/ "Cathedral"/ available in groupings of from two to fifteen reflectors/ Finland House, Finnish-American Trading Corp., Inc., 41 E. 50 St., New York, N. Y.

mural

Mirrored Panel: designed by Tom Lee, Ltd./ executed by Favrex Designs, 526 Burton Ave., Hasbrouck Heights, N. J.

walls, ceiling, flooring

Walls: painted plaster

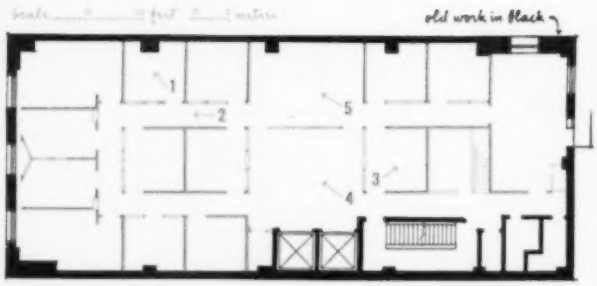
Ceiling: "Fibreglas" acoustical ceiling/ Libbey-Owens-Ford Glass Co., 552-T Wayne Bldg., Toledo, Ohio.

Flooring: concrete slab/ carpeting/ Belgian wool broadloom/ James Kiselik, 10 W. 33 St., New York, N. Y.

1

opalescent panels

2



pierced-brass hanging fixture

silk casement curtains

3

location	D. Lisner Showroom, New York, New York
interior designer	Tom Lee, Ltd.

The designer has achieved an elegant setting as a showroom and office space for wholesale merchandising of inexpensive costume jewelry. Each room has a theme that determines accent color—gold, silver, diamond, ruby, sapphire, emerald, and topaz. The jewel tones appear in upholstery and curtains and in pale pastel tints on the walls. Curtains are from floor to ceiling, accentuating the 15-foot height. Carpeting throughout is the color of the Korina wood. The lobby has tones of beige, cafe-au-lait, and seal brown, accented with polished brown-black and a smoked mirror panel encrusted with pearls, coral branches, and strands of seaweed. The panel is the motif for the showroom because the firm originally dealt in pearls, and also serves as a divider between the lobby and a conference room. All desks, storage pieces, and wardrobes have been built in—all of Korina wood, all clean, and uncluttered. The cabinetwork has been so skillfully designed and executed that it becomes a succession of unbroken planes. *Photos: J. Alex Langley*

5

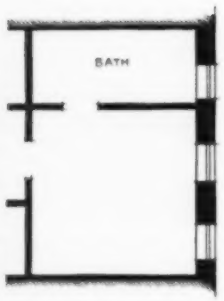
4

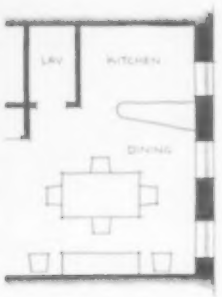
mirrored panel

remodeling

location | apartment, New York, New York

interior designers | Kim Hoffman & Stephen Heidrich





Two apartments were merged as a duplex, to provide living quarters and office space. A bedroom and adjoining bath were converted into a dining room, kitchen, and lavatory. Plywood was used to cover uneven walls in poor condition, too expensive to restore. A counter separates the dining and kitchen areas.

data

cabinetwork

Display Cases: designed by Kim Hoffman & Stephen Heidrich/ executed by Danrigon Woodworking Co., 417 E. 93 St., New York, N. Y.

furnishings and fabrics

All Furniture: custom design/ by Kim Hoffman & Steve Heidrich.

walls, ceiling, flooring

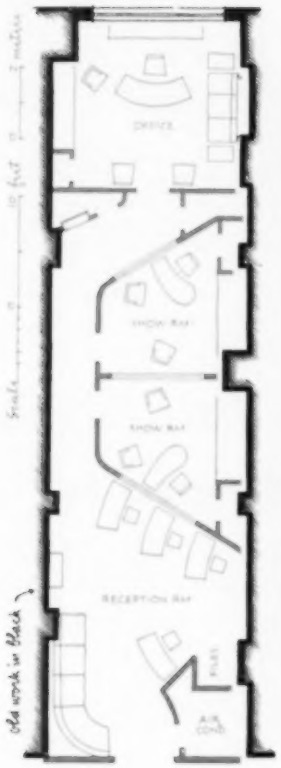
Walls: painted plaster/ corrugated frosted glass/ Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Ceiling: rough-troweled plaster.

Flooring: concrete: carpeting/ "Symphony" wool/ A. & M. Karagheusian, 295 Fifth Ave., New York, N. Y.

location	Hansen Glove Corporation, New York, New York
interior designers	Kim Hoffman & Stephen Heidrich

A difficult area to work with, 20 feet by 80 feet, this space was for reception room, two private showrooms, a private office, and space for salesmen. A curving wall with inset of corrugated construction glass, lightly tinted walls, and bright lighting expand the area visually.



corrugated-glass panel

custom-designed furniture

data

cabinetwork

Counter: designed by Kim Hoffman & Stephen Heidrich/ executed by Danrigon Woodworking Co., 417 E. 93 St., New York, N. Y.

equipment

All Kitchen Equipment: Crosley, Div. of Avco, 1329 Arlington, Cincinnati, Ohio.

furnishings and fabrics

Furniture: Vanleigh Furniture Co., Inc., 115 W. 40 St., New York, N. Y.

Curtains: cotton fabric, white ground, yellow-and-brown pattern, Copenhagen-blue accent/ J. H. Thorp, 250 Park Ave., New York, N. Y.

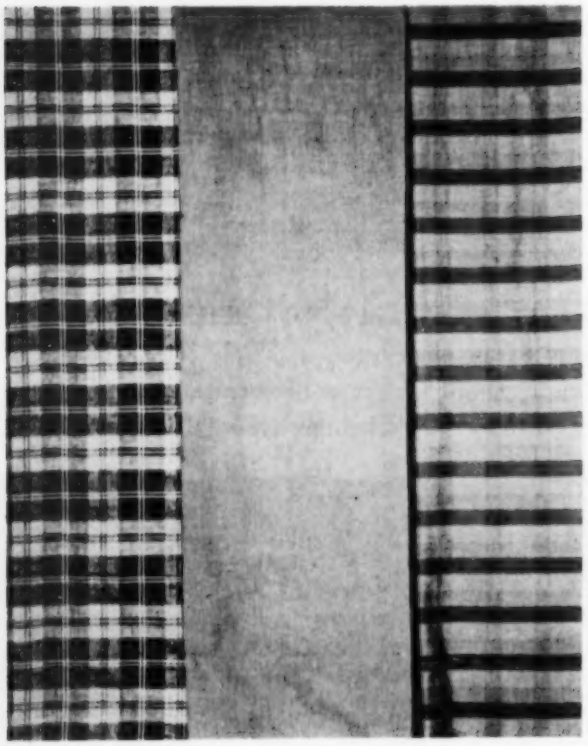
walls, ceiling, flooring

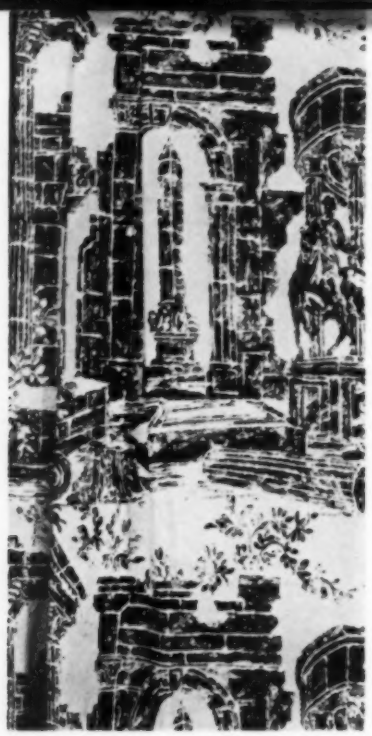
Walls: "Rippletone"/ Georgia-Pacific Plywood Co., 1302 Southern Finance Bldg., Augusta, Ga.

Ceiling: painted plaster.

Flooring: rubber tile/ Congoleum-Nairn, Inc., 195 Belgrove Dr., Kearny, N. J.

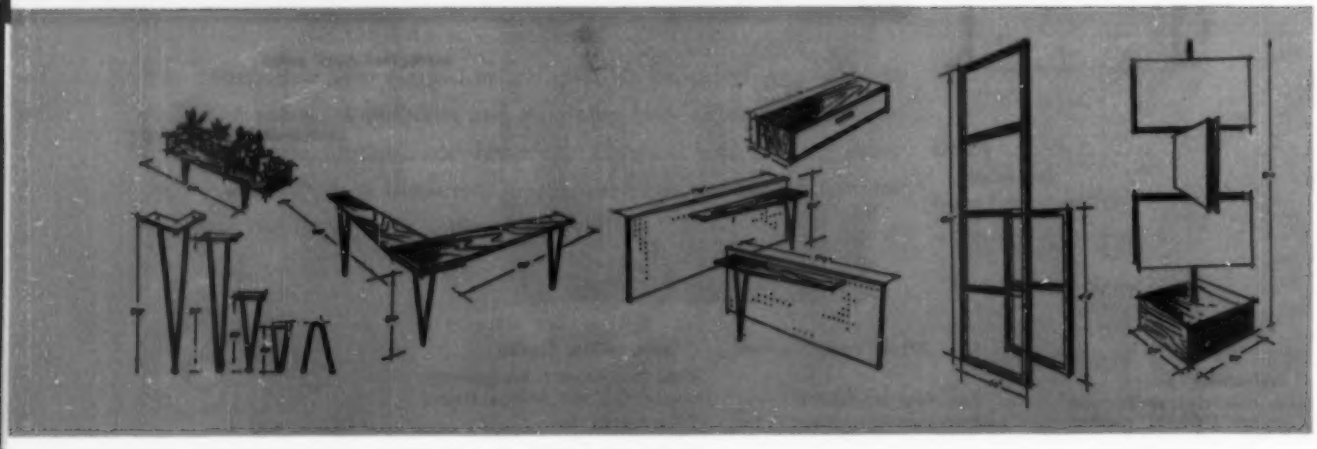
p/a interior design products





Fabrics: #74321, "Corinth"/ 48" width/ black on gray/ 100% cotton/ **retail:** $7.50 a yd./ #74510, "Antwerp" plaid/ yarn-dyed white and black/ 50" width/ 61% linen, 32% cotton, 7% rayon/ **retail:** $3.40/ #73675, "Benares" cloth/ 25% Egyptian cotton, 75% Viscose rayon/ yarn-dyed/ **retail:** $7.15/ #74665, "Benares" check/ companion fabric/ **retail:** $7.90/ **Jofa, Inc., 45 E. 53 St., New York, N. Y.**

Display Fixtures: "Moduline" units/ 15 modules available/ four- or eight-foot frames act as supporting members, have drilled holes for easy assembly/ include literature-dispensing bar, illuminated header which may carry copy, flower boxes, wrought-iron legs, tabletop panels, mechanized revolving piece/ **Structural Display Company, Inc., 44-01 11th St., Long Island City, N. Y.**



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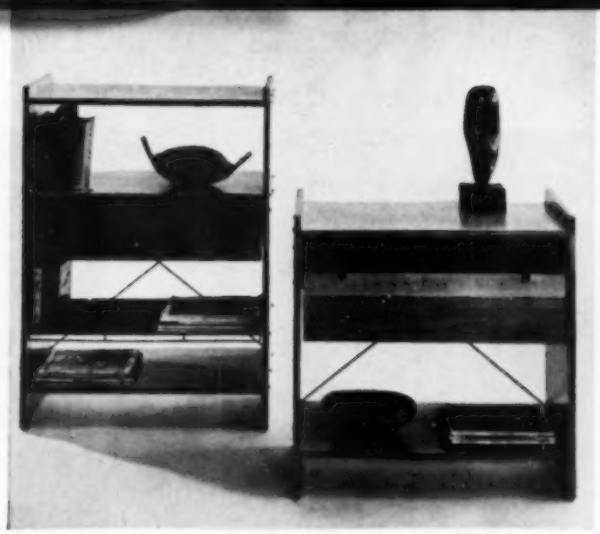
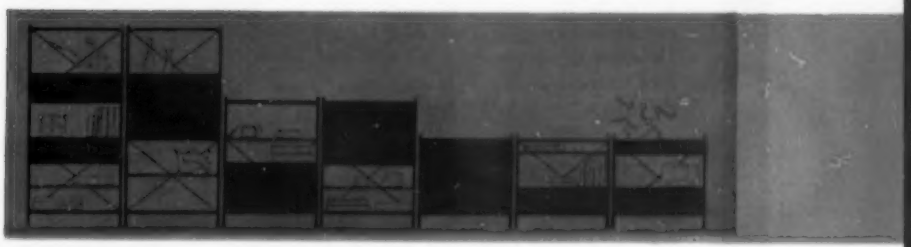


Variable Storage System: birch cases with ebonized-steel struts, wire baskets or sliding trays/ oxidized rivets exposed/ perforations on sides allow variations/ cabinets, 16" d., 32" w./ **retail:** drop-front unit, $12.50; 42" drawer, $12; 8" drawer, $15; cases, 32" h., $42, 44" h., $57/ 68" h., $84; wooden or steel wire shelves, $7/ **Allan Gould Designs, Inc., 166 Lexington Ave., New York, N. Y.**



Lamps: hanging, wall, and table/ parchment in mahogany or walnut frames/ parchment on hanging lamp held by magnets/ **retail:** $60 for hanging lamp; others, $30/ **Leslie Larson, 56 E. 66 St., New York, N. Y.**

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Through this lovely partition, one room decorates the other. Blue Ridge Doublex Glass picks up light, colors and shapes on one side and blends them into beautiful effects as it brings them through. Yet it provides a screen for privacy.

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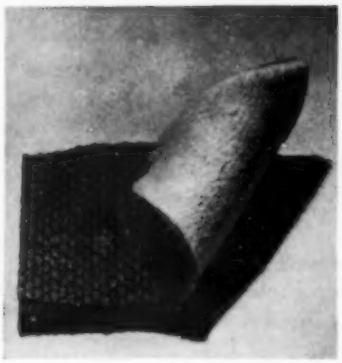
Counter Top: post-formed/ fits around roll-rim and flat rim sinks/ one-piece construction, 3" back-splash, no-drip front/ needs no finishing/ **American Radiator and Standard Sanitary Corp., Bessemer Bldg., Pittsburgh 22, Pa.**

Air Conditioner: "Airditioner"/ console type/ available in three sizes: 2/3, 1½ and 2 tons/ may be recessed up to five inches, allowing only 6" protrusion in room/ designed by Jean Otis Reinecke/ **Modine Manufacturing Co., 1806 Junction Ave., Racine, Wis.**

Desk and Cabinets: #803 desk top and pedestal (mahogany-sheathed steel)/ 78" length/ **retail:** $360/ #802A cabinet, with cane-paneled sliding drawers/ **retail:** $536/ #704, 4-drawer cabinet/ **retail:** $174/ swivel chair, #303/ **retail:** $210, in muslin/ cabinets are engineered with sliding trays, regulation file space/ **Harvey Probber, Inc., 136 Fifth Ave., New York 11, N. Y.**



Cushioned Wall Covering: "Petit Point"/ Wall-Rus fabric/ aids acoustical and temperature control/ may be hung like wallpaper, tacked, or stapled/ 33" wide/ foam rubber cushion/ available with rubber sponge or felt cushion/ **retail:** $3.02 a yd./ **B. F. Ruskin & Co., 1410 Wood Rd., New York 62, N. Y.**

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Student Typewriter Desk: #23000/ equipped with patented raising and lowering machanism for typewriter/ 7-ply birch, natural finish/ 36" l. x 22½" w. x 30" h./ **retail:** $64/ **P. & W. Cabinet Makers, Div. of Desks of America, Inc., 5814 Main St., Long Hill, Trumbull, Conn.**

Upholstery Leathers: brushed cowhide/ suede-type leather/ does not crock, colorfast/ **retail:** equivalent to a $6 a yd. fabric/ **The Upholstery Leather Group, 141 E. 44 St., New York 17, N. Y.**

Three-Dimensional Textured Wallpapers: #SA2401, "Driftwood"/ reproduces natural color of aged and weathered wood/ gray with gold, gray with lime, gray with coral/ **retail:** $9.25 a roll/ #SA2453, "California Redwood"/ resembles redwood planking/ **retail:** $9 a roll/ #SA4601, "Stripped Bark"/ colors: off-white, beige, gray, chocolate brown, earth/ **retail:** $11 a roll/ **Timbertone Decorative Co., Inc., 114 E. 32 St., New York, N. Y.**

Cotton Carpet: "Carlton"/ cut-pile, tufted carpet/ colors: Sandalwood, Spray Green, Pearl Gray, Cinnamon, Forest Green, Beige/ treated with "Resistsoil" to keep clean longer/ jute backing/ **retail:** $4.95 a sq. yd./ **A. & M. Karagheusian, Inc., 295 Fifth Ave., New York 16, N. Y.**

Horsehair Fabric Cafe Curtains: "Natural-aire" fabric/ sheds dust and dirt easily/ may be washed or dry-cleaned/ **De Risa Draperies, 15 E. 55 St., New York 22, N. Y.**

Luminaires: "The Garfield"/ 2-lamp and 4- and 8-foot fixtures/ designed for ceiling mounting/ over-all depth, 3-7/8"/ for use where low ceilings necessitate a shallow illuminating source/ **Pittsburgh Reflector Company, 407 Oliver Bldg., Pittsburgh 22, Pa.**

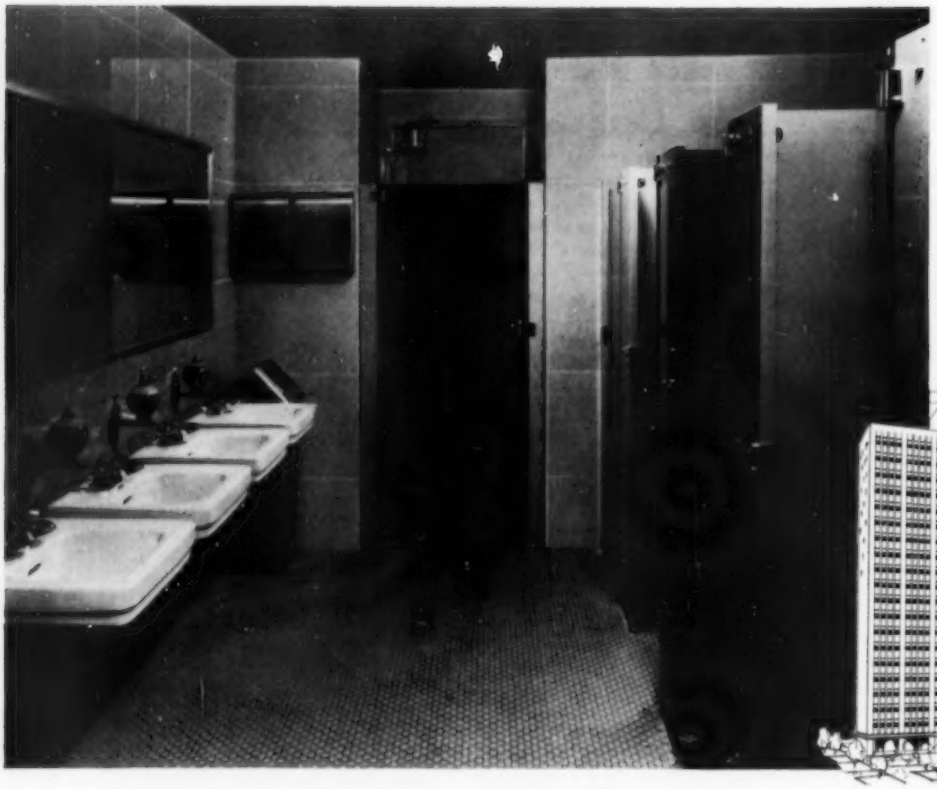
Folding Chair: #60/ fully-upholstered/ spring-arch construction seat similar to theater and auditorium styles/ free of snagging, pinching, or soiling hazards/ 20-gage triangular steel tubing reinforced with steel cross-bars/ metal parts of corrosion-resistant finish, two enamel coats/ **American Seating Co., Grand Rapids, Mich.**

Nurse's Call System: "Couch-Call"/ amplified system provides two-way voice communication between patient and nurse/ automatic operation/ calls made from pull-cord room stations, nurse answers on conventional phone/ no switches or press-to-talk buttons necessary/ priority stations possible/ **S. H. Couch, Inc., 3 Arlington St., No. Quincy 71, Mass.**

Air-Conditioning Door: 1-3/8" steel flush interior door/ grill allows proper air flow between connecting rooms required by central air conditioning installations/ eliminates need for return air ducts, does not impair heat balance/ available sizes: 2', 2'4", 2'6", 2'8" and 3' widths; 6'8" height/ **American Welding & Manufacturing Co., Griswold St., Warren, Ohio.**

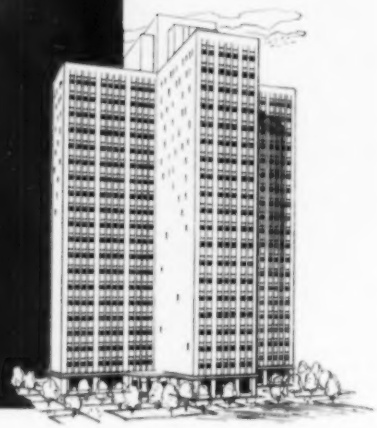
New Coloring: #2202 Wall Clock/ modern sunburst clock is now available with black, coral red, or white spokes/ twelve tapered wood shafts radiate from a central axis and replace numerals/ available with electric cord or fixture for connecting to wall outlet/ **retail:** $25/ designed by George Nelson/ **Howard Miller Clock Company, Zeeland, Mich.**

Invisible Hinge: hinge is completely hidden from view when doors or lids are closed/ beautifies, streamlines interiors/ ideal for contemporary architecture/ special rust-proof alloy/ gives excellent service under all climatic conditions/ easy to install/ pleasing to clients/ available in wide variety of sizes/ catalogue free on request/ **Soss Manufacturing Company, 21715 Hoover Road, Detroit 13, Mich.**



One Gateway Center

Modern Office Building in Pittsburgh, Pa. Architects: Rodgers Associates, New York, N. Y.; Irwin Clavan, New York, N. Y.; Eggers and Higgins, New York, N. Y.



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★ *Editors' Note: Items starred are particularly noteworthy, due to immediate and widespread interest in their contents, to the conciseness and clarity with which information is presented, to announcement of a new, important product, or to some other factor which makes them especially valuable.*

air and temperature control

1-83. Hydrotherm (100), 16-p. booklet discussing applications of high-temperature, high-pressure water in distributing heat to large area installations, including district heating, airports, hospitals, schools, shopping centers, housing projects, and industrial building groups. General design of high-temperature water systems, comparison with types of steam distribution, direct and indirect applications, sizes, costs, photos of installations. American Hydrotherm Corp., 33-70 12th St., Long Island City 6, N. Y.

1-84. Heating and Cooling Equipment (A645J), 32-p. catalog giving information on line of gas and oil furnaces, self-contained and remote year-round air-conditioning units, gas and oil wall heaters, and accessories. Description of small-type system comprising furnace, blower, fittings, and blenders; installation possibilities, unit sizes and capacities, specifications, cutaway drawings, and photos. The Coleman Co., Inc., Wichita, Kans.

1-85. Air Conditioning Systems—"Freon" Equipped, AIA 30-F (A-6692), folder containing illustrated articles on modern air-conditioning and refrigeration installations using fluorinated hydrocarbon refrigerants. Key points outlined by authorities in specific types of installations—shopping centers (Geoffrey Baker and Bruno Funaro), homes (C. Warren Cheatham), printing plants (James Mongitore), industrial buildings (A. B. Waterbury), libraries (Fred L. Moesel), and refrigerated food warehouses (L. P. St. Onge). Kinetic Chemicals Div., E. I. du Pont de Nemours & Co. (Inc.), Wilmington 99, Del.

1-86. Royal Jet Forced-Flow, Jet-Flow (SA-FF/JF), 4-p. folder listing mechanical and heating advantages of vented recessed heating units available with or without blower. Dimensions and capacities of models, construction features with cutaway drawing, types of controls, layout suggestions, placement of units, typical framing installations. Royal Jet, Inc., 1024 Westminster Ave., Alhambra, Calif.

1-87. Perimeter Diffusers, 12-p. catalog on line of room diffusers for forced-air heating and cooling systems. Description of features, including baffle plates; dimensions, heating register temperatures, cooling temperature differentials, pressure requirements, air-flow pattern, installation procedure, information on return-air grills and supply registers. Photos, drawings, charts. Titus Inc., Waterloo, Iowa.

construction

2-97. Architectural Woodwork, AIA 19-2 (I), 8-p. brochure providing general introductory information on architectural woodwork, prepared by newly formed Architectural Woodwork Institute and its Architectural Consultant, James Arkin, AIA. Purposes and functions of Institute, grouping of woods according to ability to stay in place, recommended moisture-content values for woodwork, information on water repellent treatments and surface coatings, guide to installation procedures. Photos, charts, drawings. Architectural Woodwork Institute, 332 S. Michigan Ave., Chicago 4, Ill.

2-98. Basements (F2.0), 8-p. bulletin containing pointers on good residential basement construction and suggestions for correction of common difficulties found in basements. Information on design, daylighting, moisture condensation, prevention of leaks and water seepage, recommendations with chart and drawings based on three types of soil and drainage conditions. Price: 10¢. Small Homes Council, University of Illinois, Urbana, Ill.

2-99. Vibro-Foil, 8-p. booklet describing metallic aggregate (combined with plasterizing material, cement dispersing agent, and catalyst) used to counteract initial shrinkage of concrete for resurfacing of concrete floors, concrete floor patching, bonding concrete surfaces, grouting under machinery, and tile grouting. Properties, specifications, suggestions on preparation of foundations for heavy equipment, partial list of aggregate users. A. C. Horn Co., Inc., Long Island City 1, N. Y.

2-100. Sanymetal Suspended Ceilings, AIA 39-B-1 (SN-6), 8-p. booklet on two types of suspended ceiling channels: metal nailing units adaptable to any size or type of ceiling material, and metal furring units for use with single-thread wood or sheet-metal screws. Installation photos, laboratory tests, specifications for mechanically fastened acoustical tile, installation and construction details. Suspended Ceilings Div., The Sanymetal Products Co., Inc., 2093 E. 19th St., Cleveland 15, Ohio.

2-101. How to Build Wood-Frame Teco Trussed Rafters, 16-p. booklet giving instructions for layout, fabrication, and assembly of wood trusses, using as example 24' span (out-to-out) triangular truss with 5 in 12 slope. Design drawing, specifications for lumber and hardware, materials and equipment list, layout of pattern truss; fabrication, boring and grooving, assembly, and erection of truss. Typical trussed rafter designs, types of framing anchors. Timber Engineering Co., 1319 18th St., N.W., Washington 6, D.C.

doors and windows

3-74. Crossly All-Aluminum Jalousies, AIA 35-P-3, 6-p. folder listing features of aluminum jalousie windows. Mullion and installation details, sizes, specifications covering material, weatherstripping, construction, operating hardware, finish, mullions, screens, storm sash, and erection. Crossly Window Corp., 3550 N. W. 71st St., Miami, Fla.

3-75. Fenestra Stock Products, AIA 16-E (RE-2), 12-p. catalog covering line of metal windows and doors. Description of construction, sizes, and hardware of casement, awning, basement, and utility windows. Also, information on residential-type swing and sliding closet doors, all-steel garage doors, commercial projected, intermediate projected, and security windows, hollow metal doors, installation accessories for windows. Photos, drawings, charts. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.

★ **3-76. Fiberglas Screening,** AIA 35-P-1, 4-p. folder giving information on physical properties of glass-fiber screening including strength, stability, col-

(Continued on page 151)

PROGRESSIVE ARCHITECTURE, 330 W. 42nd Street, New York 36, N. Y. I should like a copy of each piece of Manufacturers' Literature circled.

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1-84	2-101	4-61	8-45
1-85	3-74	4-62	8-46
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1-87	3-76	5-16	8-48
2-97	3-77	5-17	9-34
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Architect: **Hellmuth, Yamasaki & Leinweber, Inc., St. Louis**
Contractor: **Millstone Construction Company, St. Louis**
Owner: **St. Louis Housing Authority**

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CHEMICALS – PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

(Continued from page 149)

ors, widths, mesh, filament diameter, and shipping weight. Results of tests performed by U. S. Testing Company and U. S. Army, specifications, installation instructions. Industrial Textile Div., Owens-Corning Fiberglas Corp., 16 E. 56th St., New York 22, N.Y.

3-77. Thorn Windows, AIA 16-E-1, 32-p. catalog with detailed data on aluminum and steel pivoted and projected windows, residence casements, double-hung windows, intermediate and projected casements, projected window screens, rain shield windows, steel casement and industrial doors, and basement and utility windows. Specifications, standard types and sizes, details, photos. J. S. Thorn Co., Philadelphia 32, Pa.

3-78. Cylindrical Locksets, AIA 27-B (AT-35), 12-p. brochure describing line of cylindrical locksets available in four designs with brass, bronze, or aluminum finish. Illustrated knob, lever, escutcheon, and entrance-handle designs, specifications, cutaway drawing, installation instructions. Yale Lock & Hardware Div., Yale & Towne Mfg. Co., Stamford, Conn.

electrical equipment, lighting

4-59. Centralized School Systems (C5-53S), 12-p. brochure on four basic series of school program and intercom systems. Characteristics of each type, optional features, illustrated description of equipment, specifications. Equipment selection chart, information on accessories. David Bogen Co., Inc., 29 Ninth Ave., New York 14, N.Y.

★ **4-60. Your Home and Inspiration-Lighting,** AIA 31-F-2 (M-222), 56-p. brochure in color illustrating line of lighting fixtures in living and dining areas, bedrooms, hallways, kitchens, dinettes, bathrooms, and for exterior entrance lighting. Recessed, fluorescent strip, wall, and ceiling fixtures. Data including list price on each model. Moe Light, Ft. Atkinson, Wis.

4-61. Pittsburgh Permaflector, AIA 31-F-2 (A), 8-p. catalog outlining design and production procedures followed in manufacture of silvered-mirrored reflectors and other lighting equipment. Discussions on planned lighting, levels of illumination, fluorescent and incandescent lighting. Recommended levels of illumination for general interior lighting, application data. Illustrated. Pittsburgh Reflector Co., 421 Oliver Bldg., Pittsburgh 22, Pa.

★ **4-62. Wascolite Ventdomes,** 4-p. bulletin describing toplighting unit now available with air exhaust system contained within it. Data on acrylic-plastic dome, aluminum frame and curb, and motor-operated, built-in air exhausts, optional equipment. Specifications for light and heavy duty units, ventilating data, dimensions, installation details, nomograph, and information on school, industrial, and residential applications. Wasco Flashing Co., 89 Fawcett St., Cambridge 38, Mass.

4-63. RCA Sound Products (2R8348), 20-p. catalog covering line of sound equipment including microphones, amplifiers, speakers, intercom equipment, TV antenna systems, and unit-built cabinets and racks. Special features, uses, specifications, and photos of each model; data on systems from portable to large sound installations. Sound Products Section, Radio Corp. of America, Camden, N. J.

finishers and protectors

5-16. Daracone Water Repellent, 8-p. folder discussing theory, applications, and benefits of silicone resin water-repellent compounds for above-grade exterior masonry. Comparative ratings of various water repellents based on laboratory water-absorption tests, job specifications, test and application photos. Construction Specialties Div., Dewey and Almy Chemical Co., Cambridge 40, Mass.

5-17. Olympic Stain, Wood Blend, Special Wood Treatments, Preservatives, AIA 25-B, 14-p. folder containing descriptive and application data on stain for western red cedar and California redwood, semitransparent lightly pigmented preserva-

(Continued on page 158)

Kroger supermarket in Glendale, Missouri. Architect: Coy Weinel, St. Louis, Missouri. Contractor: White Development Corporation, St. Louis, Missouri.

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p/a manufacturers' literature

(Continued from page 151)

tive stain for smooth-surface woods, and clear wood preservative with phenyl-mercury-oleate base. Mounted wood chips showing available stain colors, characteristics, and suggestions for use. Olympic Stained Products Co., 1118 Leary Way, Seattle 7, Wash.

5-18. Paint Selection Check Chart, 6-p. folder to be used as selection guide for line of paint products. Chart includes data covering type of surface to be painted, special requirements, recommended paint, surface conditions, paint properties, and application data. The Wilbur & Williams Co., 130 Lincoln St., Boston 35, Mass.

sanitation, plumbing, water supply

7-23. Washroom Layouts (D1008), 16-p. bulletin with 28 layouts of industrial, commercial, school, and institutional washrooms. In addition, scale drawings of washfountains and showers, photos of washroom equipment, comparative floor space requirements of washfountains, lavatories, and troughs, unit capacities, roughing-in details. Bradley Washfountain Co., 2203 W. Michigan St., Milwaukee, Wis.

7-24. Deming Pumps, AIA 29-D (C-54), 96-p. catalog giving detailed data on 12 types of water systems, including dual-purpose jet pumps, submersible-type deep well pumps, various types of centrifugal pumps, and condensation return units. Dimensions, capacities, specifications, construction features, performance tables, photos of models. The Deming Co., Salem, Ohio.

specialized equipment

★ **8-45. School Furniture** (153-16), 44-p. catalog giving design and engineering features of line of classroom furniture. Illustrations in natural color, styles, variations, specifications, and price lists of chairs, tables, and desks. Rendering showing various units in typical classroom settings. Also, information on folding gym seats, partitions, stages, and wardrobes. The Brunswick-Balke-Collender Co., 623 S. Wabash, Chicago 5, Ill.

8-46. Eames Chair Chart, 6-p. folder illustrating line of modern chairs designed by Charles Eames, including molded plywood and plastic side models, upholstered and molded plastic armchairs, and upholstered wire chairs. Information on choice in seating forms, bases, colors, and upholstery fabrics. Herman Miller Furniture Co., Zeeland, Mich.

8-47. Library Bureau Furniture, AIA 35-B (LB604), 66-p. catalog with 4-p. supplement covering complete line of library furniture and equipment. Photos and dimensions of units, photos of installations, list of Library Bureau installations, index. Library Bureau, Remington Rand Inc., 315 Fourth Ave., New York 10, N. Y.

8-48. Better Laboratory Planning, AIA 35-E, 28-p. revised brochure discussing basic conclusions relating to laboratory planning and illustrated by photos of industrial, secondary school, college, hospital, and research and development laboratories. Recommended bidding practices. Laboratory Equipment Section, Scientific Apparatus Makers Assn., 20 N. Wacker Dr., Chicago 6, Ill.

surfacing materials

9-34. Marsh Products Architects' and Builders' Catalog, AIA 23-L (15531), 8-p. catalog in color with data on prefinished wall and ceiling paneling for new construction or remodeling. Available types, colors, and patterns; description of moldings and installation accessories, photos of interiors. Marsh Wall Products, Inc., Dover, Ohio.

9-35. Randomwood (R-4), 24-p. brochure (15" x 15") containing sample sheets of wood paneling which comes in flexible form. Species: ribbon prima vera, mountain tulip, mahogany, tigerwood, red birch, figured red gum, walnut, oak, and English oak. Description of each on back of samples. Price: $5.50. U. S. Plywood Corp., 55 W. 44th St., New York 36, N. Y. and The Mengel Co., 2300 Fourth St., Louisville 1, Ky.

COLOR VARIETY FOR REDWOOD
Architect:
C. E. Green,
Providence, R. I.
Cabot's Stains offer a variety of interesting effects . . . from natural to weathered tones . . . assure years of protection and beauty.
CABOT'S 325 CALIFORNIA REDWOOD STAIN – specially blended pigments blended in Creosote oil capture and preserve the natural color of new Redwood.
CABOT'S 3625 SEQUOIA RED STAIN – Similar color to Cabot's California Redwood Stain but with heavier pigmentation and greater hiding power.
CABOT'S 351 EUCALYPTUS GRAY CREOSOTE STAIN – imparts a delicate greenish gray color to the wood.
CABOT'S 241 CREOSOTE BLEACHING OIL – turns wood to driftwood gray, which develops gradually over 6 months' exposure.
CABOT'S 800 CLEAR GLOSS FINISH – a transparent waterproof finish producing a lustrous gloss . . . particularly designed for Redwood.
WRITE TODAY for folder "Redwood Staining", and color card.
SAMUEL CABOT, INC. 528 Oliver Bldg., Boston 9, Mass.
CABOT'S
REDWOOD STAINS

Pre-finished Craftwall

PANELING AND MATCHING TRIM BY

Roddiscraft

FOR BEAUTIFUL INTERIORS . . . FAST COMPLETIONS . . . LOW LABOR COSTS!

Birch Craftwall, Style 100

Pre-finished hardwood plywood panels in Birch, Maple, Oak, Walnut, Mahogany, Cherry or Blonde Limba . . . random matched for the effect of luxurious solid wood!

BEAUTIFUL Craftwall adds tremendous appeal to interiors . . . wins acclaim for architects and designers whenever it's used. And it speeds jobs through, too. There's no matching necessary, no more finishing to do. No time lost plastering, painting or papering . . . and you have perfectly finished paneling on every installation!

Offered in 4 styles, 3 sizes—with matching hardwood trim!

Craftwall offers you a complete package . . . endless design opportunities for new construction or remodeling. There are panels for vertical use, and panels for horizontal use. Panel sizes are 48" x 96" x ¼" . . . 16" x 96" x ¼" . . . 32" x 64" x ¼". Four distinctive styles . . . seven beautiful hardwoods. A full line of hardwood moldings, with materials for matching Craftwall finishes. For full details on Craftwall, send the coupon below today!

Style 100 V-grooved only

Style 200 V-grooved and cross-scored.

Style 300 V-grooved, cross-scored and pegged.

Style 400 Grooved for Horizontal applications.

Roddiscraft RODDIS PLYWOOD CORP.

Marshfield, Wisconsin

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass. • Charlotte 6, N. C. • Chicago 32, Ill. • Cincinnati 4, Ohio Cleveland 4, Ohio • Dallas 10, Texas • Detroit 14, Mich. • Houston 10, Texas • Kansas City 3, Kan. • Los Angles 58, Calif. • Louisville 10, Ky. • Marshfield, Wis. • Miami 38, Fla. • Milwaukee 8, Wis. • New Hyde Park, L. I., N. Y. • New York 55, N. Y. • Port Newark 5, N. J. • Philadelphia 34, Pa. • St. Louis 16, Mo. • San Antonio 6, Texas San Francisco 24, Calif. • San Leandro, Calif.

CRAFTWALL, RODDIS PLYWOOD CORP.
Dept. R3, Marshfield, Wis.

Yes, send me the facts on Craftwall — and matching trim in genuine hardwoods.

NAME .....
(Please print)

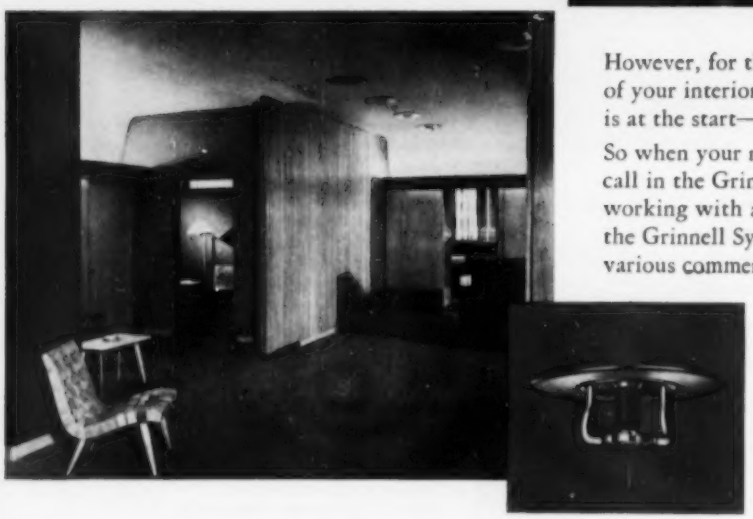
ADDRESS .....

CITY ..... STATE .....

Your interiors can be both **BEAUTIFUL** and **FIRE SAFE**

A Grinnell Automatic Sprinkler System can become a harmoniously blended part of the interiors you design.

Extending just a scant inch below the line of the ceiling, Grinnell *Flush-Type* Ceiling Sprinklers are hardly noticeable. Yet they mount unremitting guard against fire—stand ready 24 hours a day to provide dependable protection from the very first flame.

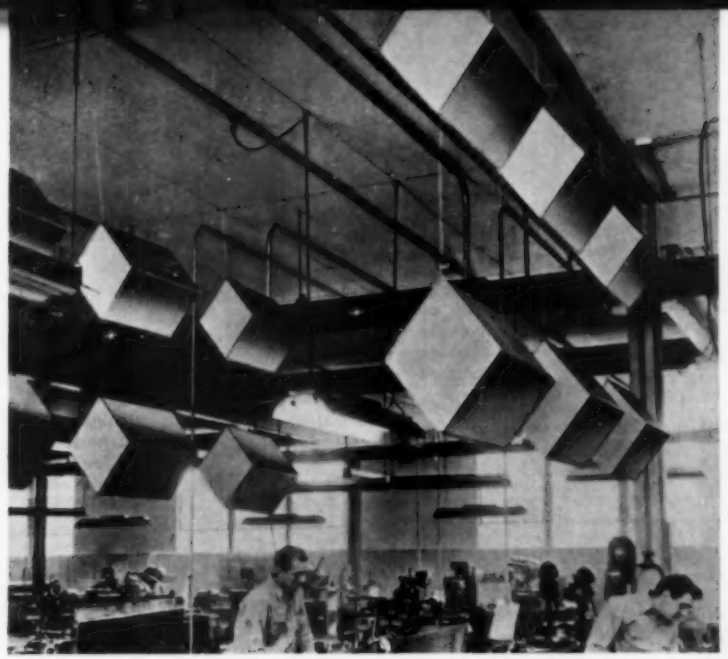


However, for the sake of retaining the attractiveness of your interiors, the time to figure on fire protection is at the start—while your plans are still developing.

So when your next project is in the blueprint stage, call in the Grinnell engineer. Long experienced in working with architects, he can give you details about the Grinnell Systems of fire protection designed for various commercial, industrial and institutional buildings. There is no obligation. Grinnell Company, Inc., 284 West Exchange Street, Providence, Rhode Island. Branch Offices in Principal Cities.

GRINNELL PROTECTION AGAINST EVERY FIRE HAZARD

Manufacturing, Engineering and Installation of Automatic Sprinklers Since 1878



Sonosorbers (above) *require no alteration of any electrical or mechanical equipment and are especially suited to noisy industrial and commercial locations where ordinary acoustical treatment is not applicable or adequate. Made of perforated aluminum laminated to a thin glass-fiber blanket, each unit weighs only 2½ lb. Sonosorber Corp., 21 South 16th St., East Orange, N. J.*

This conical hood (below) *collects smoke easily and its 12 sq ft of exposed-metal surface assures more than adequate heat radiation, plus the extra warmth from the vertical pipe. Over-all dimensions are: height of model with base, 43"; width, 37½"; and depth, 28". The fire opening is 21" high, 36" wide, and 24" deep. Condon-King Company, 613 Eighth Ave. North, Seattle 9, Wash.*

The Dial-X "memory" circuit makes it unnecessary for any user of this intercom system (desk top phone, below) *to repeat the dialing of a line that is busy. The system remembers the call and completes it the instant the busy line becomes available. Its "executive right-of-way" feature gives key executives facilities for pre-empting any line in the system. Sound Equipment Division, Stromberg-Carlson Company, Rochester 3, N. Y.*

air and temperature control

Motorstoker Crossfeed, Anthratube, Fire Jet, and Losch Boiler-Burner Unit: newly designed and improved models of automatic anthracite heating equipment shown at Anthracite Industry Commercial Equipment Show. Commercial-size equipment available in both conversion units and complete boiler and automatic firing units in 100 to 400 lb per hr capacities. Features: new principles in cross-feed firing; new water-cooled moving grates; improved versions of air-cooled grates in equipment burning Rice anthracite; also self-contained boiler-burner unit. Respective manufacturers: Hershey Machine & Foundry Co., Manheim, Pa.; Axeman-Anderson Co., Williamsport, Pa.; Electric Furnace Man, Inc., Emmaus, Pa.; and Losch Boiler Co., Summit Station, Pa.

Three-Way Weather-Flo: new heating regulator for old or new residential heating systems, including gravity or forced-flow, warm-air or hot-water types. Control measures exterior and interior temperatures, regulates burner so that temperature of air or water circulated is raised only high enough to offset resultant heat loss. Automatic Devices Co., Western Springs, Ill.

Carrier Compressor: new 12-cylinder, 75 to 100 hp reciprocating compressor designed for use at air-conditioning temperature levels, for commercial or industrial refrigeration applications, or for low-temperature work to minus 100° F. Special oil separator and control system, full-flow oil filter, new shaft seal. Compressor automatically adjusts to varying loads, can be used with Freon 12, Freon 22, or Carrene 7 refrigerants. Carrier Corp., Syracuse, N.Y.

Flexazone: air-conditioning unit for multi-room applications where independent and variable cooling and heating are desired; zones may be added or changed at any time. Horizontal or angular air flow, cool-

(Continued on page 156)

(Continued from page 155)

ing coils for use with water or direct expansion refrigerant, standard steam coils for heating, galvanized-steel panels, vinyl-coated glass wool insulation, automatic pressure-relief grease fittings. Equipment available in 8 models with capacities from 1,300 to 24,000 cfm. Drayer-Hanson, Inc., 3301 Medford St., Los Angeles 63, Calif.

Type CV Air Clear: new self-contained ozone generator for elimination of smoke, food, and other odors, developed for use with forced-air heating or cooling systems. Generator mounts on side wall of unit or on suction side of air duct where ozone can be introduced directly into airstream. General Ozone Corp., 855 W. Washington Blvd., Chicago, Ill.

Kennard Liquid Chiller: new liquid chiller designed for refrigerant in tubes and water in shell. Internal surface is integral part of tube. Liquid refrigerant is distributed to tube circuits through one or more distributors with each distributor fed by thermal expansion valve. Capacity: 2 to 200 gpm. Kennard Corp., 1819 S. Hanley Rd., St. Louis, Mo.

Are Your Wash-Up Facilities Still Adequate?

Many Are Adding More BRADLEYS

Delco-Remy
General Motors
Draper Corp.
Pueblo Steel
Singer Mfg. Co.
Southern R.R.
Hughes Aircraft
Allis-Chalmers
A.C. Spark Plug
Link Belt
Fisher Body
Yale & Towne
Barber-Colman
International Paper
Monarch Cement Co.
Sarkes-Tarzian, Inc.
American Car & Foundry
Montag Bros. (Atlanta)
Rapid Standards Co.
Fairchild Camera & Inst. Co.
McKennon Industries Ltd. (Canada)
Goss Printing Co.
National Carbon Ltd. (Canada)
Youngstown Sheet & Tube
Fairchild Engine & Airplane Corp.
Inland Steel
Fort Sill (Okla.)
New York Trap Rock
Pacific Clay Products
General Portland Cement Co.
National Gypsum Co.
Missouri Portland Cement Co.
Brookhaven Pressed Brick Mfg. Co.
U. S. Gypsum Co.
W. S. Dickey Clay Mfg. Co.
Montana Phosphate Products Co.
Platte Valley Cement Tile Co.
New England Brick Co.
Federal Crushed Stone Co.
Arundel-Brooks Concrete Corp.
Western Gypsum Co.

• During the last 30 years Bradley Washfountains have become the standard in plants in every part of the country,—of every size from a few dozen employees up to many thousands.

They are strictly sanitary; each of 8 to 10 persons accommodated simultaneously is furnished clean running water which is carried away (not collected) as it reaches the self-flushing big bowl.

FOOT-CONTROL *Prevents Contagious Faucet Contacts*

With foot-control *there are no faucets*, preventing all possible chance of transmitting germs by contact. Water is not wasted since supply is automatically cut off. Economies in space, piping installations and connections are readily apparent. BRADLEY WASHFOUNTAIN CO., 2277 W. Michigan St., Milwaukee 1, Wisconsin.

Write for Catalog 3204

BRADLEY washfountains

Distributed Through Plumbing Wholesalers

construction

Insulite Roof Deck: roof deck, made of layers of insulation laminated with waterproof adhesive, providing sheathing, insulation, and interior ceiling finish. Available with or without built-in vapor-barrier membrane and resilient gasket positioned in square tongue and groove joint. Finished units are 2′ wide, 8′ long, either 1½″, 2″, or 3″ thick. Slabs are treated to resist termite attack and rot-producing fungi. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis 2, Minn.

Unistrut Insert: new spot concrete insert designed for quick suspension of piping, electrical conduit, heating and ventilating ducts, etc. Centered side holes take reinforcing rods up to ⅜″. Load capacity: 1000 lb in average good concrete with safety factor of three; length: 4 5/16″; width: 2¼″; height: 1⅝″; weight: .54 lb. Insert will take any square or hex head nut, bolt or hanger up to ½″. Drilled holes provided for quick nailing into wood forms. Unistrut Products Co., 1013 W. Washington Blvd., Chicago, Ill.

doors and windows

Commercial Roly-Doors: new line of sectional overhead doors for commercial and industrial applications made of roll-formed, horizontally-ribbed steel panels. All moving parts ball-bearing equipped; metal surfaces coated with nonmetallic zinc phosphate; inclined tracks and beveled metal stops; S-shaped seals at all section joints; resilient rubber astragal; heavy-duty pin-tumbler locks. Doors available in 112 standard sizes. Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N.Y.

Spectrim: new line of colored, ribbed-metal moldings for facing and decorating new buildings, as well as for interior use. Aluminum strips interlock to conceal fastenings and provide weathertight joints. Sizes: 8″, 6″, 4″, 2″, and 1″ strips with full line of companion moldings; six colors and natural Alumilite. Strips can be sawed or bent on the job without affecting baked-enamel finish. Pittsburgh Plate Glass Co., 632 Ft. Duquesne Blvd., Pittsburgh 22, Pa.

Packaged Sliding Glass Doorwall: sliding-glass doors with hardwood-ash frames and aluminum vertical lines now packaged so that knocked-down unglazed door and frame fits into carton 5″ x 8″ in girth with length corresponding to greatest dimension of door unit. Hardware, screws, weather stripping, and frame included. Sizes ranging from 6′ x 6′ 10″ to 16′ x 6′ 10″ with variety of possible sliding arrangements. Horizon Door Co., Glendale, Calif.

Plastic Windows: new shatterproof windows (molded from glass fiber and polyester resin) for industrial and public

(Continued on page 158)

BRIXMENT

Better Mortar for Blocks

BETTER BOND

To obtain good concrete block walls, the best possible bond must be secured between the block and the mortar, wherever they come into contact with each other.

The mortar must stay soft and plastic long enough to let the bricklayer level, plumb and straighten the unit — to adjust it to its final position in the wall — before the mortar stiffens.

Brixment mortar has high water-retaining capacity. This prevents the porous unit from sucking the water out of the mortar too fast. It gives the bricklayer sufficient time to bring the block to its final position, while the mortar is still plastic enough to form a good tight bond with the block.

p/a products

(Continued from page 156)

buildings. Windows curve outward, have molded design which breaks up light into changing patterns. Approximately 78 percent of available light is transmitted. Square type (up to 3′ square) has diamond-shaped design; casement type, with rectangular, molded-in design, made in various sizes to fit standard casement frames. Dome-shaped skylights (3′ x 6′) also available. Molded Insulation Co., Philadelphia, Pa., and U. S. Rubber Co., Naugatuck, Conn.

electrical equipment, lighting

Flamenol: new underground feeder cable suitable for wiring around homes, farms, light industrial areas, storage yards, parking lots, camps, and parks. Recommended for installation in accordance with Article 339 of National Electrical Code. Single-conductor cable available in sizes No. 14 through No. 4 AWG; two and three-conductor cables available in sizes No. 14, 12, and 10 AWG. Construction Materials Div., General Electric Co., Bridgeport 2, Conn.

Commercial Lighting Fixture: new fluorescent lighting fixture for large-area commercial and institutional applications has 24″ x 24″ opening through depth which provides insertion of standard-dimension diffusers used with air-conditioning ducts. Lamps (24) arranged in tiers on four sides of opening. Designed for surface mounting, unit has inverted pyramid, glass-shielded body measuring 61″ square. Units may be installed singly or in groups. Gruber Lighting, 125 S. 1st St., Brooklyn 11, N.Y.

Variform: new line of circular and oval lighting fixtures with acrylic-plastic diffusing pans. Units may be recessed into ceiling or surface-mounted with 6¼″ depth below ceiling line. Circular units made in 3′ and 6′ diameters, with total wattages of 280 and 588; oval units available in 3′ x 4′ and 4′ x 6′ sizes, with wattages of 390 and 540. Shorter tubes used near fixture edges. Lighting Products, Inc., Highland Park, Ill.

Slotted Reflectors: improved line of all-white, slotted fluorescent fixtures for use in areas where critical viewing tasks are performed. Slots provide strong upward component of light, reducing brightness contrast where ceilings, pipes, and beams are also painted white. In addition, slots allow escape of air normally retained inside reflector. Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

finishers and protectors

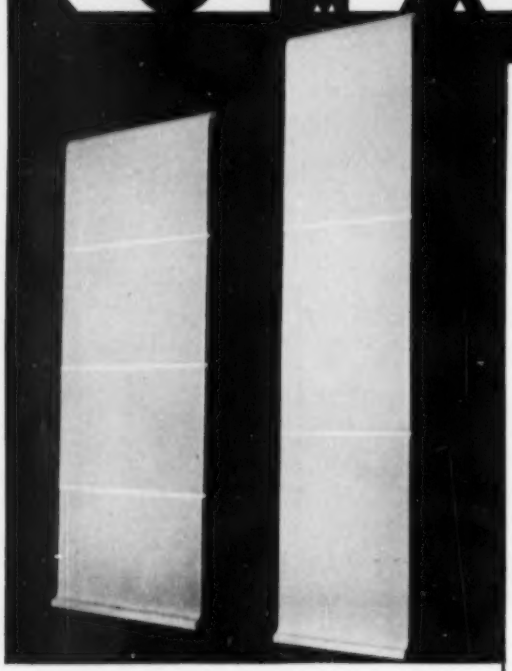
Liquid Velvet Alki-Therm: new flat wall paint in which alkyds are combined with thermolyzed oils by patented process. Paint can be bent on metal sheet to 350° angle without cracking or chipping. Special additive can be intermixed to produce higher luster and tougher finish for woodwork. System of intermixes with 25 standard colors and additions of white provides total of 175 colors. Odorless thinners used. The O'Brien Corp., South Bend, Ind.

surfacing materials

Plyaloy: new siding made by fusing smooth, durable resin overlay to exterior plywood base. Abrasion-resistant, water and weatherproof; lower edges beveled for drip. Packaged by the square with wedges and furring strips, siding comes in standard 12″, 16″, and 24″ widths, 8′ lengths. St. Paul and Tacoma Lumber Co., Tacoma 2, Wash.

Softone and Atoz Plasters: new acoustical and thermal insulating plasters will adhere to metal, wood, brick, or concrete without reinforcing attachments. Rated incombustible by Bureau of Standards, acoustical plaster with cork base is suitable for hospitals, offices, schools, restaurants, and similar buildings. Thermal-insulating plaster has fiber base with added strength to withstand hard usage such as abrasion and vibrations. Both are incombustible, are shipped in dry form. Kragor Corp., 884 N. Graham St., Allentown, Pa.

ROMANY
Real Clay



6 x 9 TILE

It's New!

Another ROMANY LEADER

Ideal for use in Corridors and other large areas of Schools, Hospitals and other Institutions.

This new enlarged shape covers more area per piece and simplifies installation. It has recently been added to the versatile ROMANY line and possesses all the high quality characteristics that have made ROMANY Tile preeminent in the building field.

The "hard as steel" glaze and rugged buff body defy wear and this 6″x9″ tile is recommended for use wherever a sturdy tile is needed.

ROMANY Tile is regularly featured in Sweet's Catalog. Detailed information to meet specific requirements will be gladly furnished upon request.

Correspondence Invited

UNITED STATES QUARRY TILE CO
Member Tile Council of America and Producers' Council, Inc.
217-G FOURTH ST., N.E., CANTON 2, OHIO

for the specification consider these outstanding features

ROMANY IS:
FIRE PROOF
WEAR PROOF
FADE PROOF
AND
ACID PROOF

And is available in more than 30 attractive colors.

when office buildings modernize . . .

JOHNSON CONTROL
automatically solves the
TEMPERATURE REGULATION PROBLEM

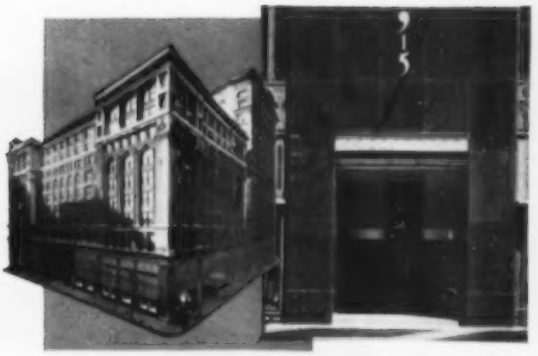
When modernizing older buildings, skillful and thrifty planners wisely entrust their temperature regulation problems to Johnson, because they know Johnson engineers apply the same specialized knowledge and service to existing buildings as they do to new construction.

In the Syndicate Trust Building in St. Louis, for example, a complete system of Johnson Automatic Temperature and Air Conditioning Control was installed nearly 40 years after the building was built!

With Johnson Control in command of the heating and air conditioning systems, there is automatic comfort control every minute of the day for the occupants of each office in the building.

In addition to *individual room* control, behind the scenes Johnson Thermostats operate Johnson Valves and Damper Operators on 17 central fan air conditioning systems which serve the entire building. All control apparatus is combined in one "Planned-for-the-Purpose" automatic control system, resulting in maximum comfort and savings for every heating and cooling dollar spent.

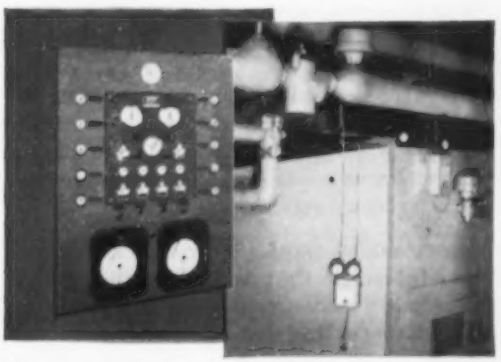
Johnson Automatic Control Systems are designed specifically for each individual installation. Let a Johnson engineer from a nearby branch provide the answer to your control problems. A talk involves no obligation. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.



Syndicate Trust Building, St. Louis, Mo. (Air conditioning and modernizing of heating system). Leo S. Weil and Walter B. Moses, mechanical engineers, New Orleans, La.; Sodemann Heat and Power Co., mechanical contractors, St. Louis, Mo.

Modern Johnson Automatic Temperature Control Systems promote higher worker efficiency and help office buildings attract prestige tenants. In the Syndicate Trust Building, a Johnson Heating-Cooling Room Thermostat permits the occupants of this typical office to select their own weather.

"The Johnson Control System in our building does exactly the job required—providing year 'round comfort with a minimum of maintenance and at substantial fuel savings," says E. B. Shannon, the building manager.



Remote temperature selections for the heating and air conditioning systems are made from this convenient central control panel.

Johnson Remote Bulb Thermostats control Valves and Damper Operators on this typical central fan air conditioning unit.

T-800 Remote Bulb Thermostat

T-901 Submaster Thermostat

T-432 Heating-Cooling Room Thermostat

D-251 Piston Damper Operator

JOHNSON *Automatic Temperature and Air Conditioning* **CONTROL**

MANUFACTURING • PLANNING • INSTALLING • SINCE 1885

MIDGET SIZE Power Plugin

NOW AVAILABLE IN 100 AMPERE CAPACITY

with plug-in outlets on 12-inch centers

Specify this efficient, economical and flexible system of power distribution for all industrial plants using small equipment — power tools, small machines, and motors, return lubricating systems, production benches, and machine illumination.

Redesigned to broaden its use through an increase of 66⅔ percent in its capacity and by closer spacing of outlets, the new Midget Ⓕ POWERPLUGIN Busduct provides "plug in and go" power for virtually every type of small equipment, affords substantial savings by eliminating long lead-ins with a resultant voltage drop, and makes it possible to move machines in and out of production lines without slowing down or delaying operations.

Approved by the Underwriters' Laboratories, Inc., for label service, the new Midget Ⓕ POWERPLUGIN is only 3½ inches wide and 2 inches deep in size. It is available in standard 5 and 10 foot lengths and can be arranged to fit almost any requirement. While standard sections have plug in outlets every twelve inches, additional outlets and special lengths are available on specific order.

Midget Ⓕ POWERPLUGIN is available in 100 amp., 250 volt feeder capacity for 2, 3 or 4 conductor solid neutral types for equipment requiring connections for ½ to 3 HP, 240 volt motors or less AC or DC and 7½ HP maximum for motors with dual element fuses. The 2 and 3 conductor types provide 220 volts single phase or three phase power to motors while the 4 conductor type provides single or three phase power for motors and 120 volts for machine illumination.

For additional information about this new and more efficient and flexible system of power distribution contact your nearest Ⓕ representative, listed in Sweet's or a Ⓕ distributor. Or send for Bulletin No. 720.

Frank Adam Electric Co.

P. O. BOX 357 • ST. LOUIS 3, MISSOURI

Makers of: BUSDUCT • PANELBOARDS • SWITCHBOARDS • SERVICE EQUIPMENT • SAFETY SWITCHES • LOAD CENTERS • QUIKHETER

by Carl Feiss

out of school

Again this column is being written in flight—at this moment out from the Tri-Cities Airport in northeastern Tennessee, westward toward Knoxville. It is a clear, cool day with the Cumberlands 'way to the north and the Great Smokies crisp, deep-blue and gray, out my window to the south. We are flying over Jefferson County, with the long tendrils of the lake subtended by the great Cherokee Dam just under us, to the right, and the twisted waters of the huge reservoir created by the Douglas Dam, on the left. Lakes and reservoirs have a coy habit of wrapping themselves snugly around a contour line. Each estuary, bay, shoal, inlet, arm, and island of these vast new waters seems to belong as contentedly there as if it had been created by the same forces that threw up the mountain peaks, instead of by a concrete cork in the neck of a narrow valley. It is a never-ending miracle to me that TVA is so vast and that it works. I've seen bits of it from the ground at many contact points, but it has to be viewed from the air, mile after mile across Tennessee and Alabama, to be really comprehended. Since I fly around a lot I always take an Esso road map along. That is how I am so glib about these things and where they are. It also makes both the trip and conversations with seat-mates more interesting.

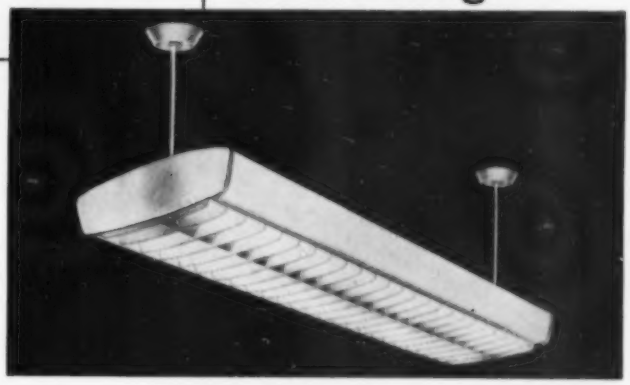
I like what is happening in the TVA country—not only the physical things like the beautiful engineering, the prosperous farms, the great new industrial plants, the new recreation areas, and all the exciting rest of the show; but other even more substantive and important developments like the little art show in the basement of the Parthenon in Nashville. It is the work of art students and faculty at the University of Alabama. Very good and fresh! And you will have to go far to see anything more exciting than Schwiekher & Elting's new chapel and theater on the campus of Maryville College in Maryville, Tennessee. Beats their Fine Arts Center by a long shot, and that is no slouch of a building. Yankeeland had better look again to its fading cultural laurels.

The quotation which caps this month's

(Continued on page 162)

"This environment of ours is largely an artifact. In our technologically advanced state of affairs, it is a pile of often incoherent fabrications and constructions interfering with life processes and adulterating them."
Richard Neutra: *Survival through Design* (Oxford Press, 1954)

SEEING is Believing



The Arthur

A & B 14000 SERIES

4 & 8 FOOT FLUORESCENT LUMINAIRES

Using standard or slimline lamps

A VERSATILE DIRECT-INDIRECT LUMINAIRE FOR INDIVIDUAL OR END-TO-END PENDANT MOUNTING

The 2-lamp Arthur, with its direct-indirect component is designed specifically for pendant mounting. Sloping ends, plus trim, shallow lines and all white finish give the unit a particularly light and graceful appearance.

Diffusing polystyrene side panels and 35° x 35° louver shielding result in an eye-comforting brightness pattern. When lighted, the Arthur blends harmoniously into the ceiling.

Open chassis construction makes the unit easy to install; all metal parts are die formed; 8-foot units require hangers only on the ends. Side panels slip into position; hinged louver opens or removes quickly. Unit is wired complete, ready to install, less lamps.

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out of school

(Continued from page 161)

column from Richard Neutra's new book is all too true, except in those rare places where man's artifacts benefit the life processes and where there is evidence that through the application of sound physical planning our advancement of technology can also be directed towards the advancement of man.

Lower v. *Higher Education* (a continuation from the April column on "The Structure of Architectural Education").

In discussing the subjects of April OUT OF SCHOOL with a friend, he referred to my statement that "the structure of architectural education can be no stronger than its lowest level," and then wondered why I started so far *up* the line, at the level of career counseling for high school student. While I tend to discount prenatal influence on the training of architects and planners, there may be something in it for the geneticist. Several sons of architects—and even grandsons— seem to have inherited their paternal and grand-paternal abilities. The Upjohns and Saarinens are good examples. (I know several others whose ability to imbibe large quantities of stimulating beverages has been inherited from their architectural forebears, but the transmittal of other necessary architectural talents and competencies seems to have failed.)

Obviously, however, I should not have omitted mention of the teaching of architecture in the primary and secondary schools. What I have been thinking about has been education for the profession rather than for the public. This is not to discount in any way the vital importance of architectural education of the citizenry at large. As professionals we are fully aware of our meager role (in the mind of the public). Public education is partly a public relations job for the profession, but there is also an academic side to it, not only in the lower schools but also in the colleges and universities in a wide variety of arts and sciences courses, engineering and other curricula, from history to urban sociology and public health, in which comprehensive architecture is or should be involved. There is no end to the subjects to be covered here in time. However, I am going to stick to professional education while we are talking about the *structure* of architectural education.

Certainly, if architecture were a subject taught in the primary and secondary schools, it should prove an important incubator for architects. But schoolmen of the architectural and related professions are more concerned with the weaknesses of public and private school education as demonstrated by the inability of college freshmen to read, write, concentrate, and cogitate. Despite all the differences in educational point of view between the various design schools, and despite the frictions, rivalries, and general lack of intercommunication among the schoolmen, when pinned down they all seem to agree that young architects should be able to read, write and think, whatever their design abilities. (I am not implying that

(Continued on page 164)

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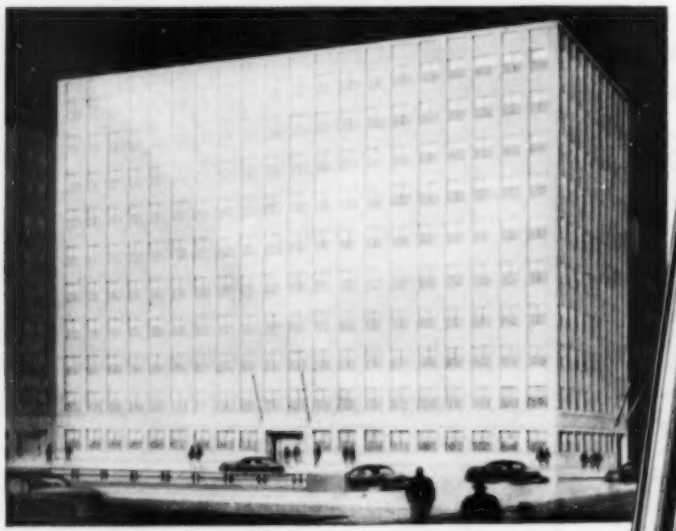

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out of school

(Continued from page 162)

I've pinned down all schoolmen, but it might be fun.)

The inadequacies of lower school education are so nationwide and college educators are so generally resigned to the situation that intellectual adolescence is accepted, often through the first two years of so-called "higher education." This means that what could have been taught —say algebra and geometry—in the 10th and 11th grades of high school have to be taught, or at least reviewed, during the first years of college. The "general education" courses and the "pre-architectural" year or years required by some colleges largely constitute make-up years in which all students are averaged before starting their "higher" education. This is one of the reasons for five- and six-year architectural curricula and is a surrender by the American college educator to the deficiencies of our lower educational systems. Maybe "surrender" is too strong a word. Maybe it is just an "adaptation," but whatever it is, it is a regrettable waste of time and a tragic misuse of the vital formative years of the young American. For this we can only blame ourselves as citizens. None of us takes seriously enough not only the poor school plants in our communities, but also the poor salaries of teachers, inadequate school budgets, bad leadership, overcrowded classes, overwork, poor teacher training, unsatisfactory teacher insurance and retirement systems, snooping and attacks on local educational systems, and the other thousand and one elements which make public school education so unrewarding that only the most dedicated or least competent are interested in teaching careers.

So here is a weak point in the structure of American architectural education that is common to all American education.

What should be done? We are talking here about a problem of such vast scale and with so many facets that it dwarfs the training of the comprehensive architect per se. However, the AIA Committee on Education and the Association of Collegiate Schools of Architecture might well

(Continued on page 166)

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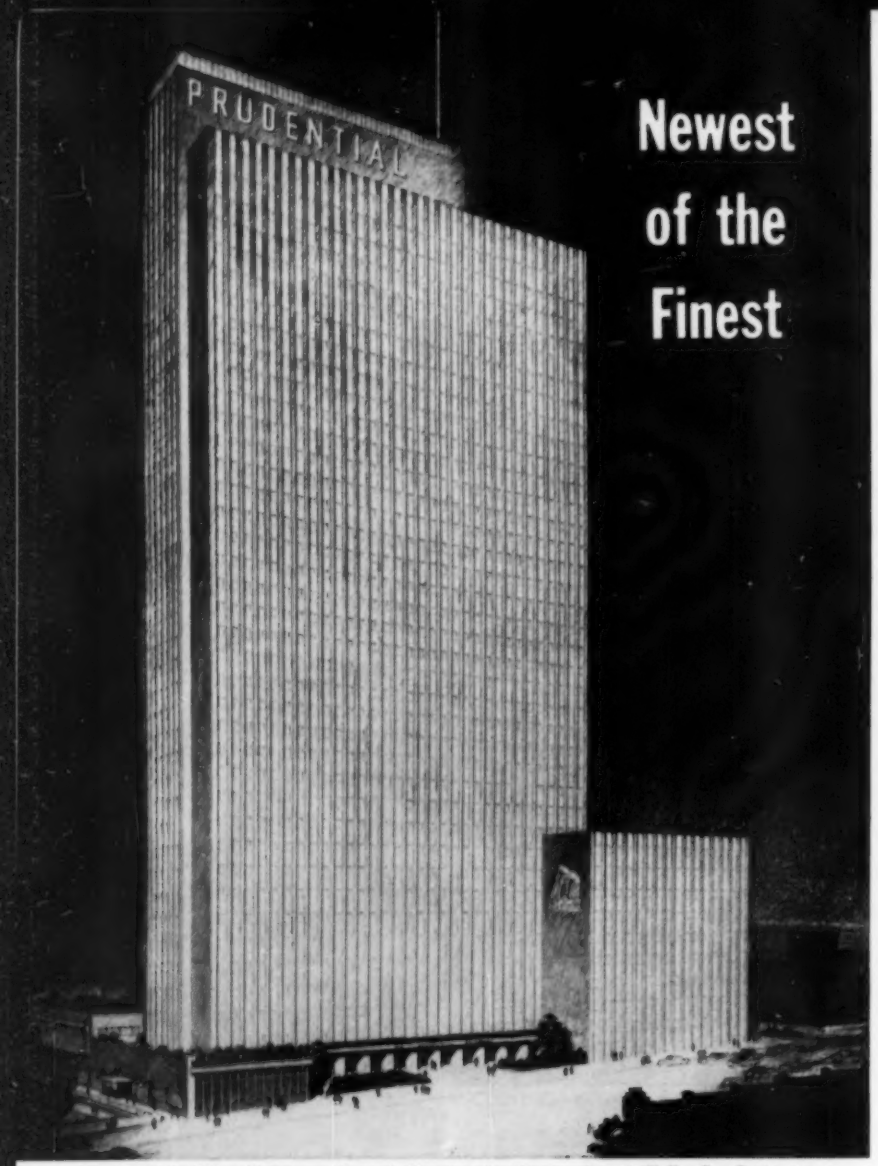

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out of school

(Continued from page 164)

get together and offer their joint backing and assistance to those national school organizations now directing their attention to American public-school education and its deficiencies. The American credo is that all of our children have a right to a sound education. I would hate to think, however, that it is the American credo that such education costs too much and therefore we must relegate the future of these children to a secondary place in the American Dream. If this is the case, the Dream then becomes nightmare.

•

The Science of Association. In the April column, I quoted de Tocqueville: "The science of association is the mother of sciences." Let me follow this up, because it is important in our understanding of the educational structure of our art and science of comprehensive architecture.

Architects have, as have the the other professions, organized for their general welfare, mutual education, and for social intercourse. The American Institute of Architects is now over 100 years old and is an institution well recognized as the parent organization of the American profession of architecture, as the Royal Institute of British Architects is for England, and as similar associations are in other countries. The allied professions of city planning, landscape architecture, engineering, interior design, and others are served in kind by professional associations representing common specialized interests.

Association within the profession of architecture and the allied arts and sciences is a highly developed but not always scientific activity. In all voluntary associations there is the tendency to form committees and subcommittees, and subcommittees of subcommittees, as new problems arise or old problems remain unsolved. There is also constant splintering of groups with special interests or opinions, prejudices, or sensitivities. Further, leadership in these voluntary associations is variable and fickle. The total result is difficult to assess, although the structure and the improvement of the pro-

fessions depend upon the existence of these societies, whatever their name, effectiveness, or responsibilities.

It is a concomitant of organizational character that voluntary professional societies are generally conservative in nature. These organizations are usually made up of the mass of practitioners, who will average their philosophies by election of officers who think as the mass does, and by voting on professional issues somewhere between the middle and the extreme right. It is for these reasons that we almost invariably find a reluctance of those who consider themselves radical, liberal, modern, or just individual and different, to participate actively in the affairs of their own professional groups. Often they form splinter groups of their own which, under the humorless influence of time, seem invariably to be reabsorbed by the parent body. Young men grow old, and the radicals of today are the conservatives of tomorrow.

There are four American voluntary associations which control the education of American architects, and two for the city planners—whether the professional educators, practitioners, and students know it—or whether they like it. For the architects there are: American Institute of Architects, Association of Collegiate Schools of Architecture, National Architectural Accrediting Board, and National Council of Architectural Registration Boards. For the City Planners there are: American Institute of Planners and American Society of Planning Officials. Since the predominant number of planning schools are within, or associated with schools of architecture, the four architectural associations cannot be discounted as important to planning as well.

Of the four architectural associations, the most direct and powerful educational influence is that of the National Council of Architectural Registration Boards. While the NCARB does not actually directly impose its influence on curricula or teaching methods, nor does it direct examination practices in the 48 states, the registration and licensing of architects is

(Continued on page 168)

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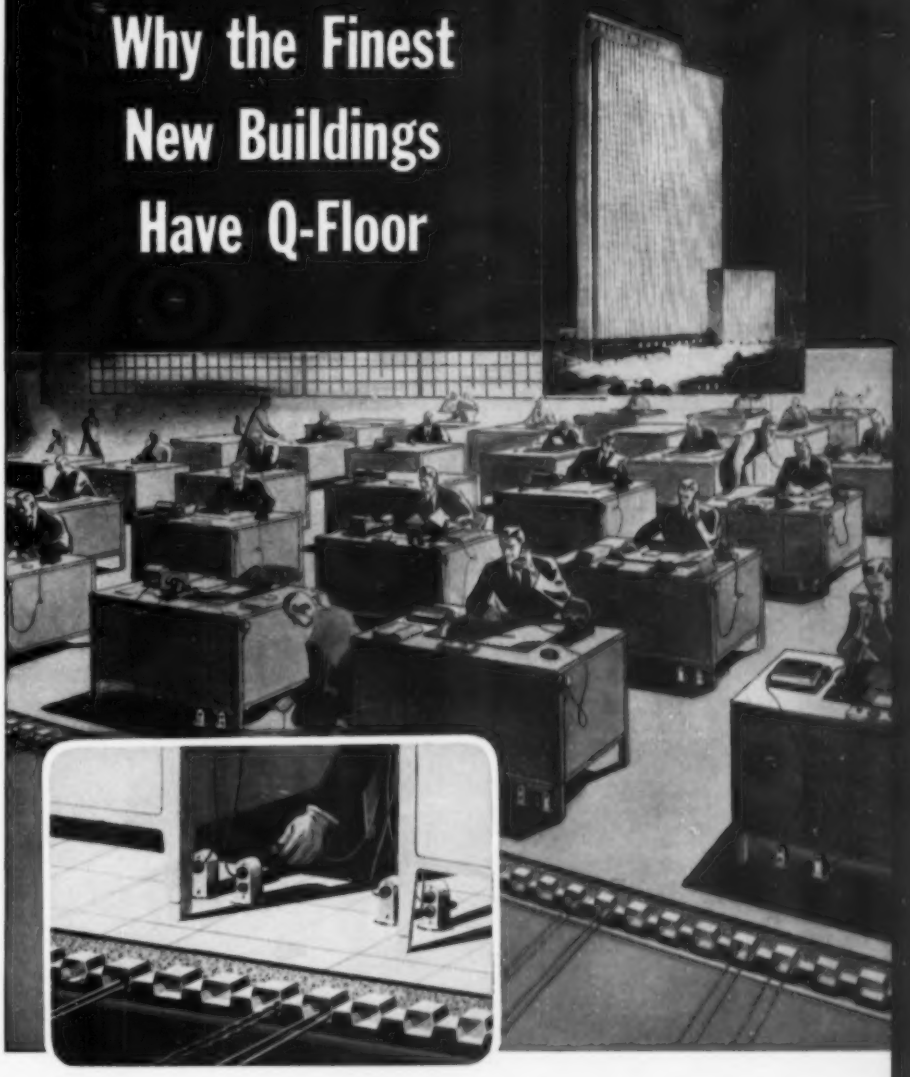

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out of school

(Continued from page 167)

a major control point in the structure of professional education and is the obviously focal career point for professional practice. The staging of state examinations, the character of the examinations themselves, and the philosophy of licensing for professional standards and uniform practice is the heavy responsibility of the NCARB. Those educational systems which cannot train for examinations will obviously not succeed as schools. There is of course a never-ending debate on who controls what and whether education should be influenced by licensing requirements. We will enter this debate ourselves one of these days. But willy nilly, the student, whether from a so-called "contemporary" school or from some conservative or run-of-the-mill school (and there are several), must face up to the state examination, which, in his career, is more important than even the baccalaureate degree itself.

Since each of the 48 states has complete autonomy in deciding who, how, and what should be the controls of architectural registration, the NCARB as it gathers experience and strength in its special activity of advising the state registration boards will assume greater magnitude in the educational process. This is inevitable. In recognition of the importance of mutual understanding on matters of policy and intercommunication, there was held this January the first "four power" conference at the Octagon, AIA headquarters, in which these four educational organizations (the Committee on Education of the AIA representing the AIA), explored their present and future relationships. Probably no more important architectural education get-together has occurred in recent years. If the "four powers" can continue to meet in an amicable and constructive fashion, a unity of philosophy and action can do much to develop the science of association and promote the profession.

I have been distressed during my last three years as Chairman of the National Committee on Education of the AIA by the suspicious attitude taken by many schoolmen toward the Associations, which are theirs for the acting. Several schoolmen openly state that they do not care to be associated for fear of being controlled. I should think that it is obvious that a sound organization in a democracy is representative rather than dictatorial, that it cannot completely represent if those who who are afraid of being controlled do not join. No association is better than the membership it represents.

Further, it is clear to me as I have worked with the various educational organizations through the years, that the formulation of top philosophy and policy of education and practice is still a long way off. There is ample opportunity for great thinking and real leadership by my successors in the AIA and in the years to come in the other three educational associations. Certainly no one for a moment is satisfied with the small beginning of our

(Continued on page 170)

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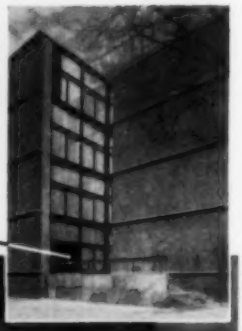

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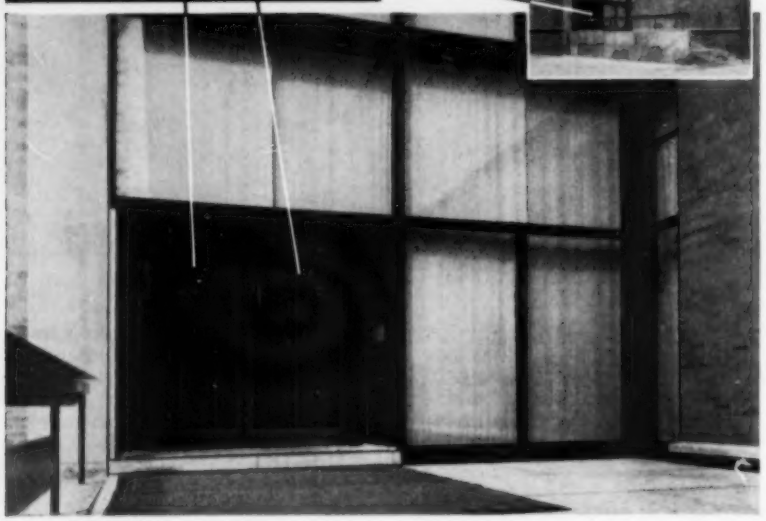

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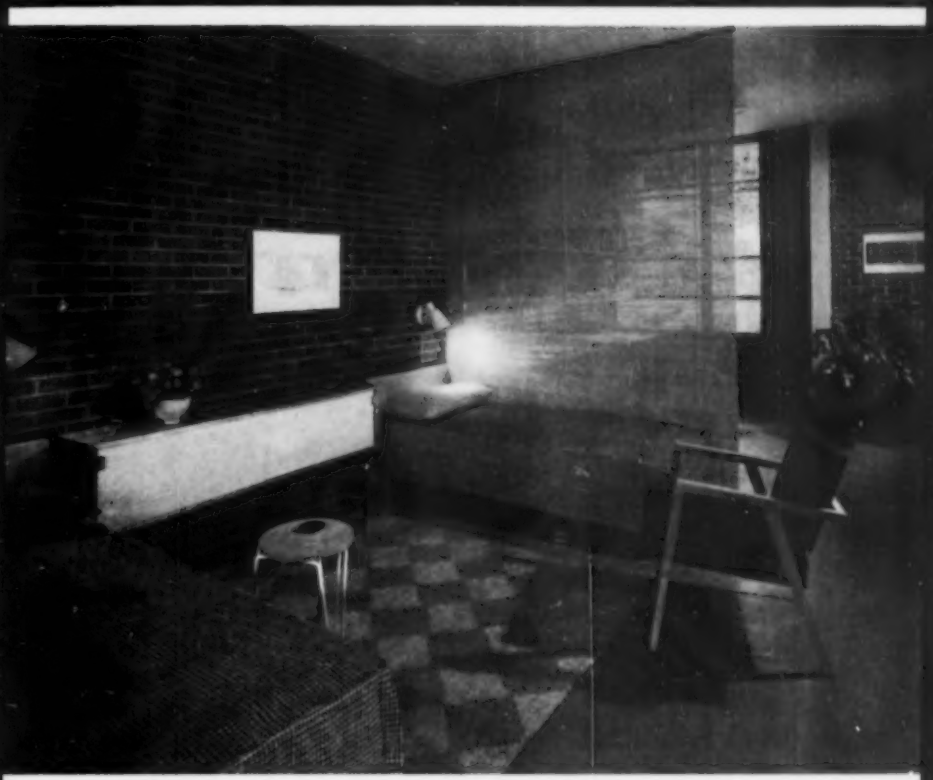

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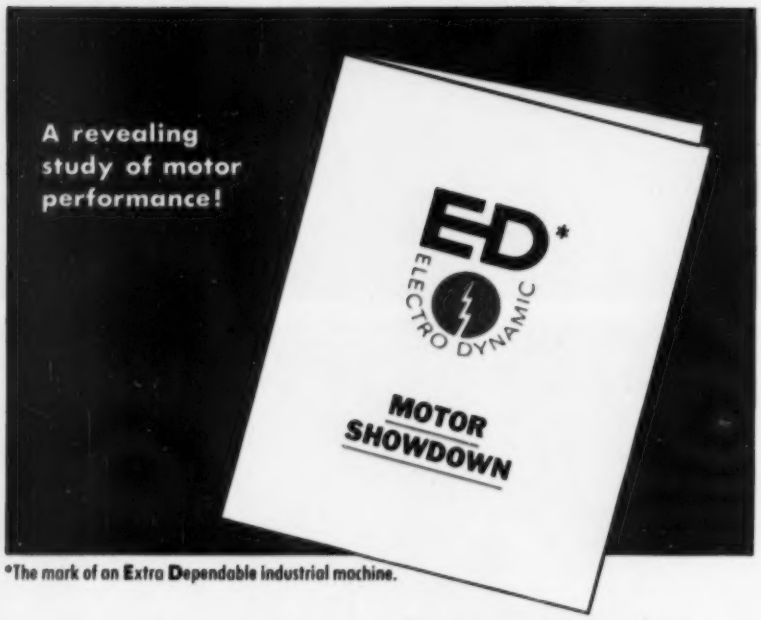

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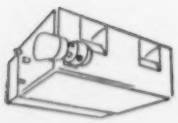

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out of school

(Continued from page 168)

group action or the lightweight of our accomplishment.

It is the last point, the lightweight of accomplishment, that we regret. That the history of association for the advancement of architectural and planning education is a short one and that it has not been very productive, should be an inducement for strengthening the activity and developing programs of mutual interest and in some part, of mutual assistance. After all, Architecture is the common goal.

During the remainder of the year I hope to present to you some more detailed information about these important associations mentioned here—how they are organized and what they do, so that everybody will have a clearer picture of the structure of American architectural and planning education than is available at present. As a footnote, I will ultimately call your attention to the results of the two significant surveys on professional education after they are published; that oft mentioned 1950 Survey of the Architectural Profession by the Commission for the Survey of Education and Registration financed by the Carnegie Foundation, directed by Dr. Edwin S. Burdell of the Cooper Union and sponsored by the AIA; and the about-to-be-published Survey of Planning Education, financed and published by the Alfred Bettman Foundation, directed by Prof. Frederick J. Adams, of M.I.T., and sponsored by the American Society of Planning Officials and the Committee on Education of the American Institute of Planners.

letter to the schoolmaster

Dear Mr. Feiss: Just to say that your article in OUT OF SCHOOL in February 1954 P/A, having to do with teachers of architecture and city planning in the collegiate schools and with much that is involved everywhere in the efforts toward "Renewing Our Cities," is really most interesting and wonderful to read. The book itself by Miles Colean, which I trust more and more people will send in for, will be

(Continued on page 174)

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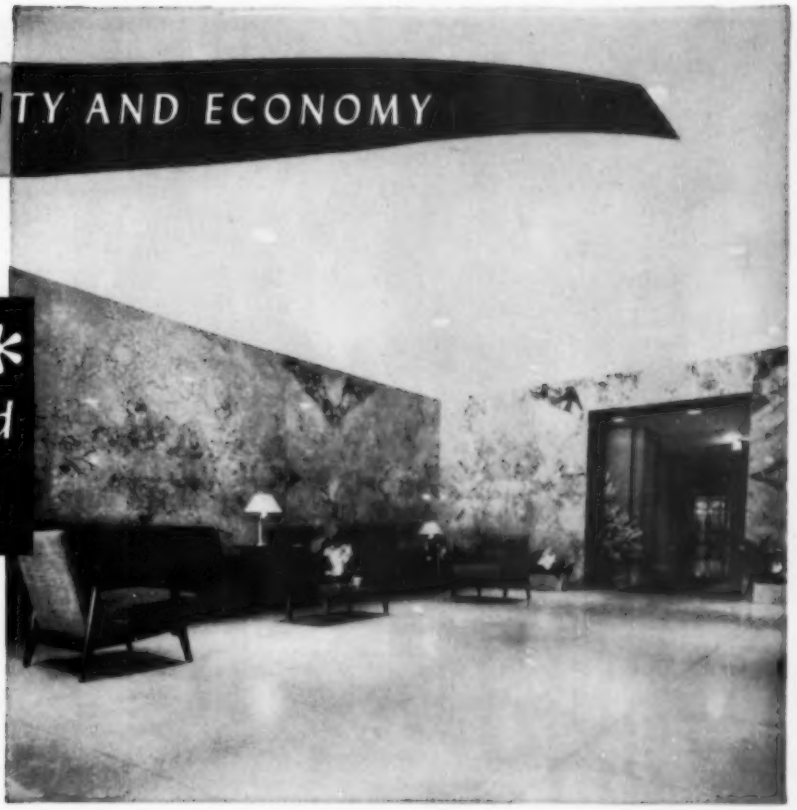

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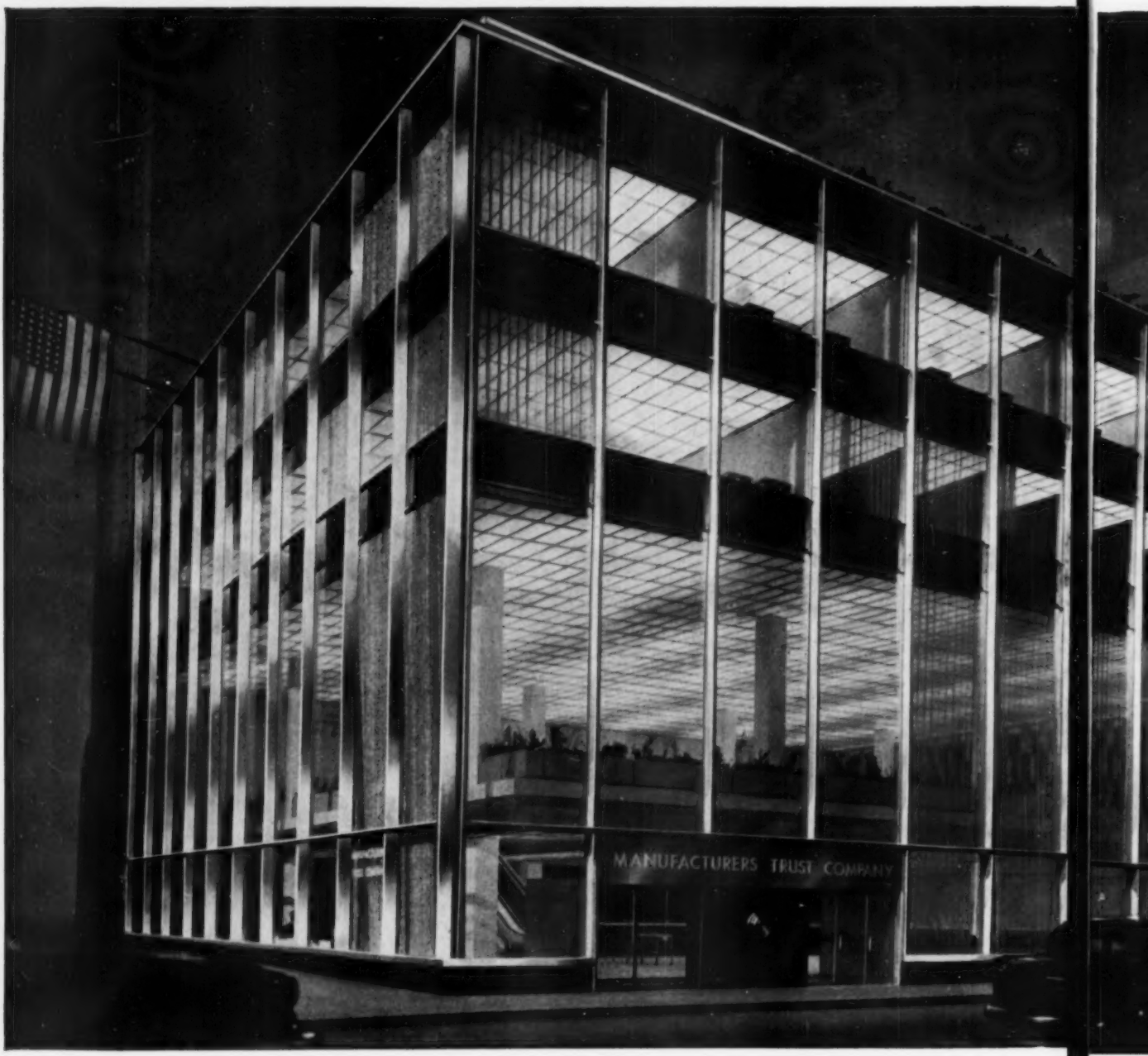

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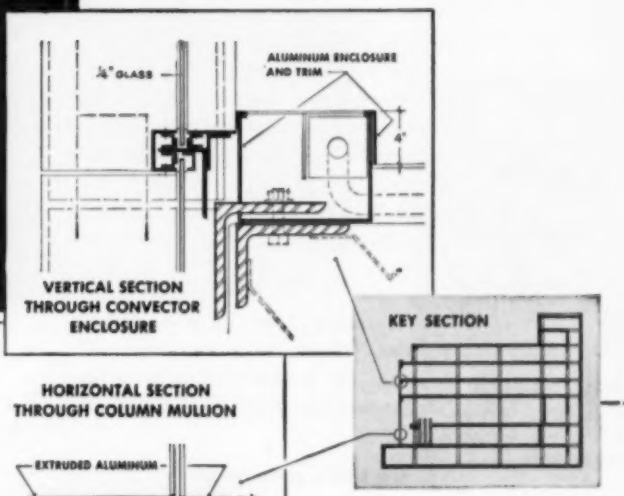

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out of school

(Continued from page 170)

pretty engrossing, too, no doubt. But to get all of these things going a little better it takes lots of "guidance" on the part, again, of more and more people, to others. The Carson-Pirie-Scott Competition—for the Central Commercial District in Chicago should be interesting in this respect. Meanwhile will be looking forward to further paragraphs of OUT OF SCHOOL on the above.

PETER FRANTZ
Saginaw, Mich.

Dear Mr. Frantz: *Thank you for your pleasant note about the February article. It apparently struck a responsive chord with several readers so I will add "further paragraphs" on the subject as you suggest. There is a very full schedule of articles coming up for the rest of the year so keep your eyes peeled.*

CARL FEISS

notices

meetings

THE THIRTY-NINTH ANNUAL CONFERENCE OF THE BUILDING OFFICIALS CONFERENCE OF AMERICA, INC., will be held at the Bellevue Stratford Hotel, Philadelphia, Pa., May 10-13, 1954. The Conference will cover technical discussions of interest to all segments of the construction industry and will include business sessions of the Conference and discussion of proposed changes in the BOCA Building Codes. There will be exhibits in conjunction with the Conference.

THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS will hold its 16th Annual Convention at the Netherland Plaza Hotel, Cincinnati, Ohio, May 12-15.

new offices, partnerships

JAMES S. LIBERTY, AIA, Architect, Main Bldg., Medical Arts Square, 801 Encino Place, N.E., Albuquerque, N. Mex.

TERRELL R. HARPER, Architect, 710 Thomas Bldg., Dallas 1, Tex.

A. BLAINE IMEL, Architect, 3303 South Peoria, Tulsa, Okla.

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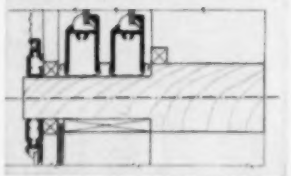
COSMIC-RAY LABORATORY — J. GONZALES REYNA, ARCH.

- for renderings,
- working drawings,
- details



HUNTER FRAME-LESS SLIDING WINDOW

*read lēds or lēds

Whichever way you read it, the point is on the lead. 1904 Mars-Lumograph imported drawing leads are perfect for every step of the job. They're so opaque that inking-in is not necessary; they're ribbed for firm clutch grip and each has a metal cap which prevents sliding from the holder. In the 1001 Technico Mars-Lumograph holder (where they belong), Mars Leads will always have a fine point—for built right into the Technico's push-button cap is a unique lead sharpener. The Technico has a noiseless, smooth-working, low-friction clutch mechanism and lightweight wood construction for perfect balance. 1904 Mars-Lumograph Leads and the 1001 Technico Mars-Lumograph are an unbeatable combination.

The 1001 Mars-Technico—$1.50 each—less in quantity. 1904 Mars-Lumograph Leads—available in 18 degrees—EXB to 9H. $1.20 per dozen—less in quantity.

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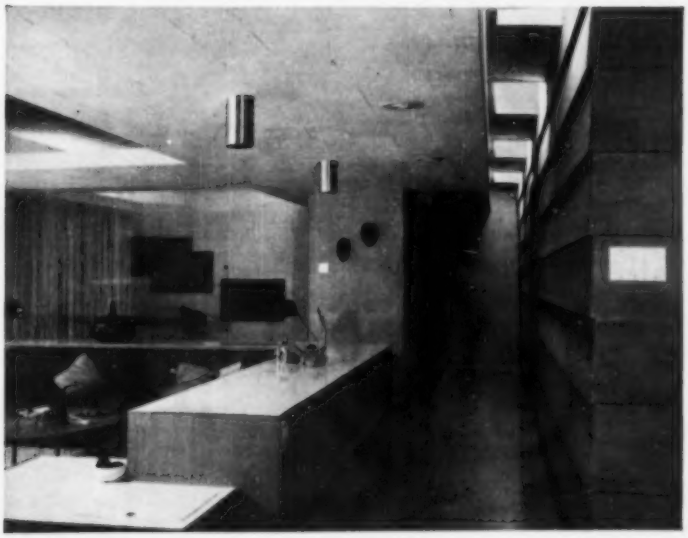
TOPS IN TOPLIGHTING



CHEERFUL DAYLIGHTING, evenly distributed, brightens the home of Architect Ken Fryar. In designing his new home, Mr. Fryar specified Wascolite Skydomes because they admit maximum daylight . . . eliminate dark corners . . . permit functional use of space. Skydomes also enabled Mr. Fryar to improve his creative design . . . add a distinctive, modern appearance to his home.

WASCOLITE SKYDOMES are lightweight, prefabricated units that do not require special roof construction. Their extruded aluminum frames have a built-in weepage arrangement that assures leakproof installation. Skydomes are weatherproof, shatter-resistant and virtually self-cleaning. They can be installed in minutes — using only a screwdriver.

CREDITS: Architect (and owner): Ken Fryar, Michigan City, Indiana.
Contractor: Tonn and Blank, Inc., Michigan City, Indiana.

IDEAL FOR ANY ROOM. Domes are available in White Translucent acrylic plastic for glarefree daylighting, or in Clear Colorless acrylic plastic for efficient daylighting of task areas.

WASCOLITE SKYDOMES can also be used to daylight carports and attics. When added insulation is required, specify Wascolite Ceiling Domes.

NEW WASCOLITE VENTDOME, with motor-driven air exhaust, provides toplighting and ventilation through one roof opening. FHA has now approved interior bathrooms and utility rooms. Use Ventdomes to daylight and ventilate these areas.

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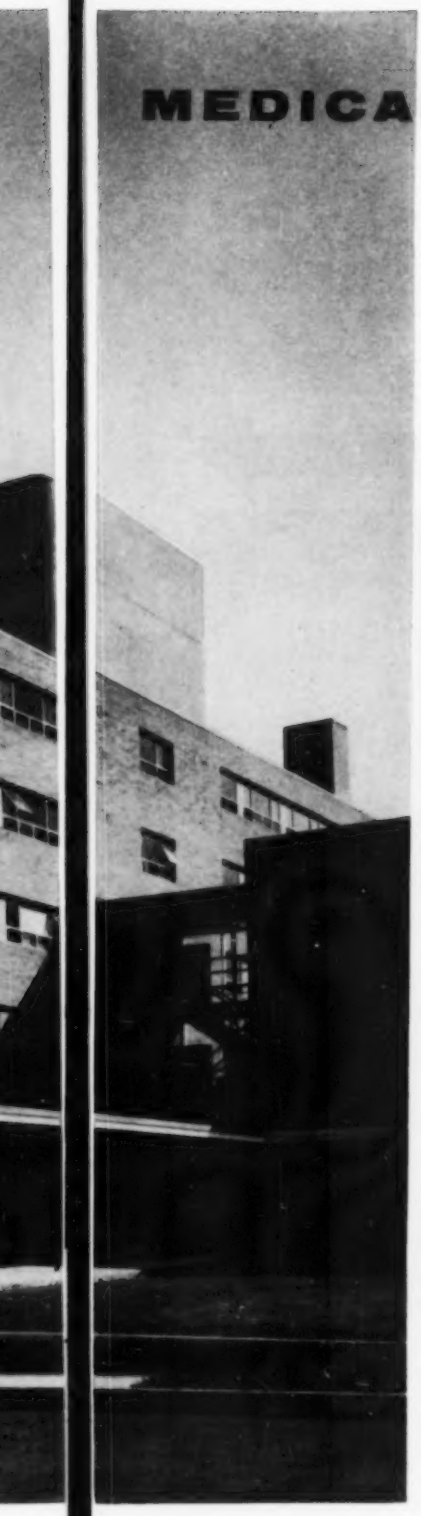
LOCATED IN A RURAL SECTION near the town of Flemington, New Jersey, the new Hunterdon County Medical Center is an outstanding accomplishment in community endeavor. Built in the form of a large "T," this hospital uses Pittsburgh Glass as a basic element of its design. The five-story nursing wing and all patients' rooms are glazed with large panes of Pittsburgh Polished Plate Glass which extend from 18" sills to the ceilings. Other Pittsburgh products include Herculite Doors, Twindow insulating units, copper backed mirrors and Pittco Metal.

Architect: Vincent G. Kling, Philadelphia, Pa.



MEDICAL CENTER in New Jersey

makes impressive use of Pittsburgh Glass

THIS VIEW is of the base of the "T," and is at the north end of the "Center." Like the main entrance, this entrance to the out patient department is served by Pittsburgh's Herculite Doors—the favorite of American architects because of their strength, durability and dependability.

THESE LARGE WINDOWS, glazed with Pittsburgh Polished Plate Glass, are at the rear of the building where the majority of patients are located. They give patients a clear view of the rolling countryside, help to relieve the monotony of hospital confinement.

Design it better with **Pittsburgh Glass**

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reciprocal volumes

The Pelican History of Art. *Edited by Nikolaus Pevsner. Volume Z3.* **Architecture in Britain 1530-1830.** *By John Summerson, and Volume Z4.* **Art and Architecture in France 1500-1700.** *By Anthony Blunt, Penguin Books, Inc., 3300 Clipper Mill Rd., Baltimore, Md., 1954. 373 pp., illus. and 313 pp., illus. Each $8.50*

The first two volumes of this new and unique project, an English-language encyclopedia of art and architecture of the world (*reviewed in* February 1954 P/A, *p. 164*) had made a great promise. Ellis Waterhouse in his *Painting in Britain 1530-1790* set a pattern for scholarly presentation that made even extremely dull subject-matter historically interesting; and Benjamin Rowland's *The Art and Architecture of India* opened a completely new vista into a visual world that knows no dividing line between art and architecture, between magic and anthropomorphic symbolism.

Now we have two new volumes whose specific value lies in their reciprocal relationship. The hostilities and affinities, so puzzling to the American visitor, that characterize French-English relationships, are here demonstrated in solid stone. A decisive chapter of European history is written in plans and elevations. When the curtain finally fell over the Middle Ages and the two lusty rebels of the new freedom—François Ier of France and Henry VIII of England—both died in 1547, the destiny of the two principal nations moved in different directions. France, pushed by two ambitious regents, Richilieu and Mazarin, toward Absolutism, rose to meteoric heights of brilliance and world leadership, to be eclipsed in a long and painful decline of almost 100 years, ending with the massacre of the Great Revolution. England, on the other hand, sat through the Long Parliament, the Commonwealth, and into the Age of Walpole and the inane Hanoverians, bearing with patience the vagaries of Absolutism, meanwhile consolidating Humanism and Mercantilism through the forces of bourgeoisie and gentry. These two books of *THE PELICAN HISTORY OF ART* re-

(Continued on page 182)

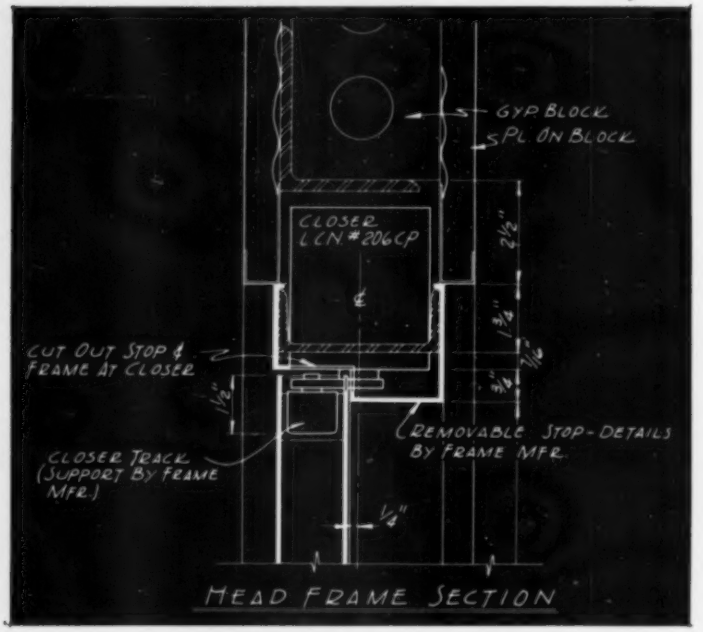
books received

Colour and Light at Work. Robert F. Wilson. Architectural Book Publishing Co., Inc., 112 W. 46 St., New York 36, N.Y., 1954. 148 pp., illus., $4

A History of the School of Architecture (Columbia University). Theodor K. Rohdenburg. Columbia University Press, New York 27, N. Y., 1954. 114 pp., $2.50

History Builds the Town. Arthur Korn. Lund Humphries, 12 Bedford Sq., London, W.C.1, England. Distributed by The British Book Centre, Inc., 122 E. 55 St., New York 22, N. Y., 1954. 110 pp., illus., $10

Homes of the Brave. T. H. Robsjohn Gibbings. Drawings by Mary Petty. Alfred A. Knopf, 501 Madison Ave., New York, N.Y., 1954. 113 pp., illus., $3.50



CONSTRUCTION DETAILS
for LCN Overhead Concealed Door Closer Installation Shown on Opposite Page

The LCN Series 200 CP Closer's Main Points:

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Even in these days of advanced lighting practices, every so often an installation comes along that reaches beyond the usual and touches greatness.
The lighting in Parker Pen Company's new Arrow Park plant at Janesville, Wisconsin, is one of these.

Every Parker worker, including those in production plant areas, works beneath a high level of super comfortable illumination from Day-Brite recessed troffers. Beyond a doubt, this is one of the finest industrial lighting installations in the world.

General offices, private offices and conference room are lighted by 854 runs of 8-ft. Day-Brite Low-Brightness Lens troffers recessed into a modern grid type suspended ceiling. Equipped with Holophane Controlens* to reduce glare, these fixtures furnish extremely comfortable illumination.
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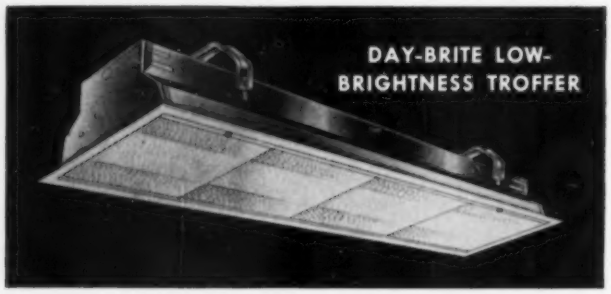

The new Arrow Park plant in Janesville, Wisconsin—home of famous Parker pens. Its white Roman brick exterior encloses 212,500 square feet of floor space housing all pen and pencil manufacturing facilities of the firm. Architects: John J. Flad and Associates of Madison, Wisconsin. Consulting Engineers: Beling Engineering Consultants, Moline, Illinois. Electrical Contractor: Westphal & Co., Janesville, Wisconsin.

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A partial view of the attractive Parker Pen Arrow Park plant area. Covering 200,000 square feet, this huge working space looks like anything but a factory. *Twenty-four hundred 8-ft. Day-Brite glass enclosed troffers provide 55 footcandles of glare-free light for every plant operation.* This is believed to be a more extensive use of recessed troffer lighting in an acoustical grid type suspended ceiling than in any other plant in the nation.

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Rather, we present the Parker Pen installation as evidence of the trend among leading architects and engineers—*and their clients*—toward more and more emphasis on *maximum quality* lighting.

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reviews

(Continued from page 178)

count this contrasting development with excellent illustrations and concise and understandable text.

One has only to compare the plans of, say, *Chenonceau* in France with the Elizabethan *Longleat*, or Cerceau's *Charleval* with *Hardwick Hall*, and the difference, as it developed in the last quarter of the 16th Century, is evident. In France, design is all. Buildings are mere ornaments on the drawing, put there to accentuate air space, *les vues d'optique*. In England, the yeoman-turned-landed-gentleman expresses his pride in spacious shelter and decorative treatment of interior space. His façades are perforated by glazed bays that liberate the inhabitant from the damp darkness of the Norman Keep.

By the middle of the 17th Century, French Absolutism succeeded in subjugating the Church and silencing the people. François Mansart, Jean Hardouin Mansart, and Le Vau catered to a dream of omnipotence that expresses itself in building schemes of insane scope. "Forcer La Nature" applies to more than tapis vert and espalier; stone and stucco curve in baroque convulsions, and painter and sculptor—Bellange's incredibly sensuous "*Three Marys*," for instance, or Lebrun's hypocritical "*Louis XIV Adoring The Risen Christ*"—supply variations to the architectural theme. The Leitmotif of the 17th Century; *Gesamtkunstwerk* (totality of art creation), is here achieved under the total impact of the monarchic personality.

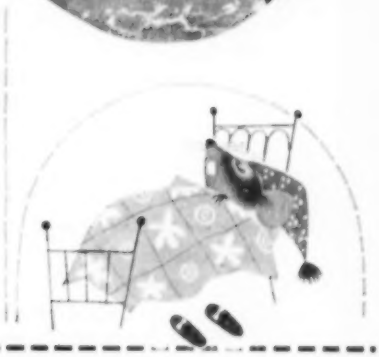
In the England of Inigo Jones and Christopher Wren the impetus toward a renaissance of classical grandeur does not come from a deified prince but from the books of Palladio and Alberti. It is a two-dimensional, calculated architecture, unsupported by painting or sculpture. But where the French exhausted their imagination and their resources in a few stupendous structures, such as the additions to the *Louvre*, *Versailles*, and the *Grand Hotels;* the English contributed an astounding number of excellent, still serviceable public buildings, colleges and, above all, hospitals. The difference in communal concept is here signified by

(Continued on page 188)

Gold Seal Rubber Tile

the quiet floor with the built-in bounce

When you want a *showpiece* floor . . . specify Gold Seal Rubber Tile. It's so resilient it puts wonderful comfort into footsteps . . . hushes every room to soothing quiet. This magnificent resilience helps it do *the best job* of resisting indentation from heavy furniture and leather heels . . . keeps it from chipping or cracking! Gold Seal Rubber Tile has a beauty that lasts its life through . . . needs little upkeep. Its *clearer, truer, more beautiful colors* suggest an endless variation of appealing design combinations. Now in 21 marbleized colors. Standard and ⅛" gauges. 6" x 6", 9" x 9", 12" x 12" tiles.



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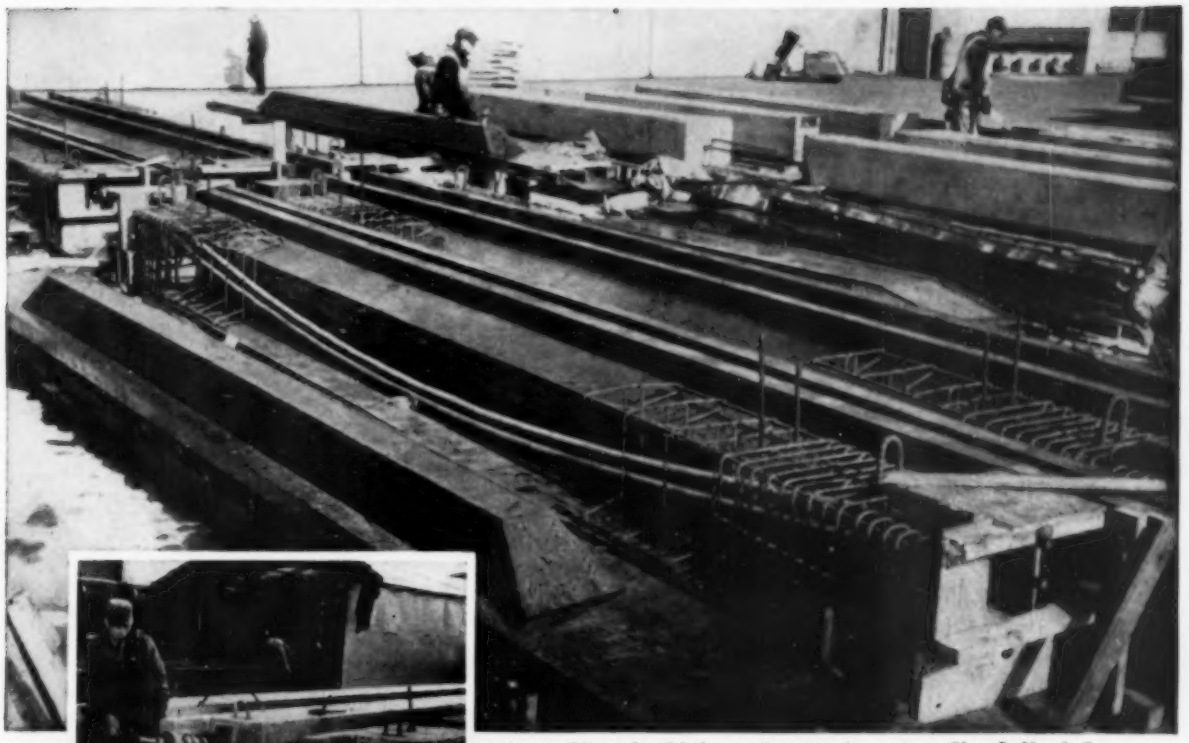

Stressteel Bars placed in forms prior to pouring concrete. Glenn L. Martin Co. Plant, Baltimore, Md.

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Stressteel Tensioning Units now make prestressed concrete construction completely practical and competitive with other types of construction.

Stressteel Tensioning Units are alloy steel bars of extremely high strength, together with suitable anchoring assemblies. Stressteel bars—½" to 1¼" in diameter—are fully capable of carrying the sustained high stresses necessary to prestress concrete. They allow you to place concrete in a permanent state of compression.

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You can apply Stressteel Tensioning Units to bridges, building frames, dams, retaining walls, pavements, poles, piles, roof slabs, beams, bulkhead tiebacks, and to reinforce existing concrete structures. Write for the Truscon Stressteel manual listing applications, design data, specifications and procedures.

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The comfort problem in a large department store such as the Emporium above is quite different from, say, a small shop. Crowds change greatly in size; department needs vary. But Honeywell Customized Temperature Control easily meets the comfort problems in a wide variety of Stonestown shops.

Inviting modern exteriors, as this view shows, are an important part of Stonestown's customer appeal. Generous overhang provides shelter from rain and sun. Interiors of all buildings provide the finest of comfort—because Honeywell Customized Temperature Control is on the job everywhere at Stonestown.

Inside the medical center (above) you'll find a Honeywell thermostat in every suite or office. This means patients and guests can enjoy *individual* comfort—truly a customized feature that can't fail to please everyone who works in or visits Stonestown.

How Honeywell
Customized Temperature Control
helps provide

Better business weather for your clients

Why Honeywell Customized Temperature Control is becoming a "must" in all types of buildings

THE state of *Business,* with a capital "B", depends on a multitude of varying factors. But to an important extent, the state of business of a particular client of yours depends on the kind of service he offers—and *how* he offers it.

Take, for example, the Stonestown Shopping Center in San Francisco. All aspects of sound shopping center construction and procedure have been carefully adopted.

Important among these is "indoor weather". Its proper control means a lot to the people who work for your clients—and to those who buy from them, too.

Today the best way to provide proper temperature control is through the use of *Honeywell Customized Temperature Control.*

The key word here is "customized." It means that whatever your clients' control requirements, a Honeywell Customized Temperature Control installation *designed to fit the needs of the building and its occupants is your answer.* This applies not only to heating and cooling, ventilating and humidity control but to industrial control as well.

Only Honeywell can provide true "customized" control. Because only Honeywell manufactures all three types of controls—pneumatic, electric and electronic.

The story, in brief form, of the Honeywell Customized Temperature Control installation in the Stonestown Shopping Center is told here.

The *techniques* used, applied to your particular problems, can help you give your clients the "indoor weather" they've always wanted.

Aerial view of Stonestown, the big regional shopping community in suburban San Francisco. Center includes apartments you see above as well as shopping facilities. Architects: Welton Becket & Associates, Los Angeles. Engineers: Hillberg, Byler and Hengstler, Los Angeles; Deane & Hill, San Francisco.

For comfortable, even temperature in new or existing buildings –of any size–specify Honeywell Customized Temperature Control

Whether it's a shopping center, factory, office, motel, hospital, school–or any size building–new or existing, Honeywell Customized Temperature Control can help meet your clients' heating, ventilating, air conditioning and industrial control problems.

Your clients will not only enjoy more comfort and efficiency, they'll save fuel, too.

For full facts on Honeywell Customized Temperature Control, call your local Honeywell office. Or mail the coupon today.

Henry Stoneson, community builder, president of Stoneson Development Corporation, owners of Stonestown Shopping Center, says:

"We believe Stonestown, a "City Within A City", is one of the most pleasant in the world for the shopper. Important in helping make possible this comfort is our Honeywell Customized Temperature Control installation."

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Reinsuring Entrance Efficiency

BEFORE: One of the wood revolving doors, installed in 1920 at the Insurance Exchange Building — recessed 10 feet from the sidewalk line.

THIS recent remodeling project at the Insurance Exchange Building marks a noteworthy "encore" for revolving doors. For its first entrance modernization in 1920, Chicago's largest office building chose these doors that are "always open — always closed." The fact that revolving doors again rated first choice for this newest, ultra-modern entrance is an endorsement that speaks for itself.

In most of the important buildings throughout the country, revolving doors provide soundest entrance insurance — against stack drafts and street dirt — maintain positive control of even the rush-hour traffic. You'll find all the supporting facts detailed in the new International Entrance Planning Manual.

You'll also find a wealth of information, covering complete entrances to match every requirement: Revolving Doors, Swing Doors, or combinations of both, in complete packaged entrances, in a broad range of materials . . . and in an all-inclusive price range. Insure continued client approval with the best in building entrances. Mail the above coupon *now*.

AFTER: Remodeled entrance and lobby, with new stainless steel revolving doors now flush with the sidewalk line — adding 25% more usable lobby space.

ARCHITECTS-ENGINEERS: Naess & Murphy

INTERNATIONAL VAN-KANNEL ALWAYS OPEN ALWAYS CLOSED

REVOLVING DOOR DIVISION
2003 EDGAR ST., EVANSVILLE 7, IND.

INTERNATIONAL STEEL COMPANY

reviews

(Continued from page 188)

its architecture. True, there are Vanbrugh's monstrosities, and later *Keddlestone* and *Holkham*. But they are curios, not prototypes.

Another important lesson to be learnt from these two volumes is the influence of material on style. The unlimited supply of fine building stone imposed no restraint on the Renaissance buildings of France. They could surfeit the eye with façade carving, as Libby-Owens-Ford today can surfeit the eye with glass. In England, at an early date, good building stone became scarce and timber nondurable. Brick became the standard building unit of the Elizabethan, Jacobean, and early Stuart periods, and it produced a refinement and restraint in façade organization that still has great appeal today. If one compares, in the two books, May's *Eltham Lodge* (1664) with Bruet's *Hall of the Merchant Drapers* (1655) one finds the same basic style concept: central bay with pediment, pilaster strips, hipped roof. But the effect is pompously royal in France, and delicately refined in England.

For America, comparison of 17th Century churches is particularly interesting. The churches of Wren and Hawksmore, in spite of their classicistic exteriors, are assembly churches based on the function of interior space. Derand's *Saint-Paul Saint-Louis, Val-de-Grace* by Mansart, or *Saint-Sulpice* by Le Vau are ballrooms, dedicated to the Virgin Mary and the Counter-Reformation. From the English prototype grew the American meeting house; the French splendor seems purely historical today.

The French volume achieves total unity of presentation by adding to each architectural epoch the contemporary work of painting and sculpture. But by historical verdict it must stop with *Versailles* and the year 1700. The last third of the English volume makes one almost wish John Summerson had done the same. Few Americans share the enthusiasm of the British for such later 18th Century architects as Chambers, Wyatt, and Smirke. The loving care given to a minor Vanbrugh or a remote Sloane on the deli-

(Continued on page 192)

New **beauty**... *New* **efficiency**... *New* **practicality**

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New beauty! Vizalite is molded in attractive, 3-dimensional designs that enhance the appearance of industrial and public buildings of all kinds. In colors and patterns to suit the architect, it provides pleasing interior lighting effects that change with the position of the sun and the viewer.

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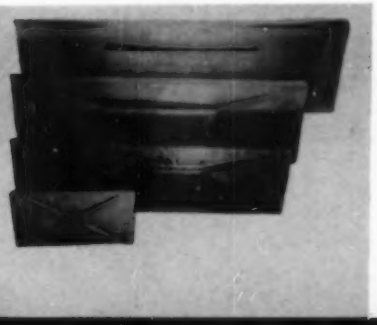
For information on Vizalite, write the manufacturer, Molded Insulation Company, 335 Price Street, Philadelphia, Penna. For more on Vibrin®, write the address below.

Sample panels of reinforced Vibrin Vizalite



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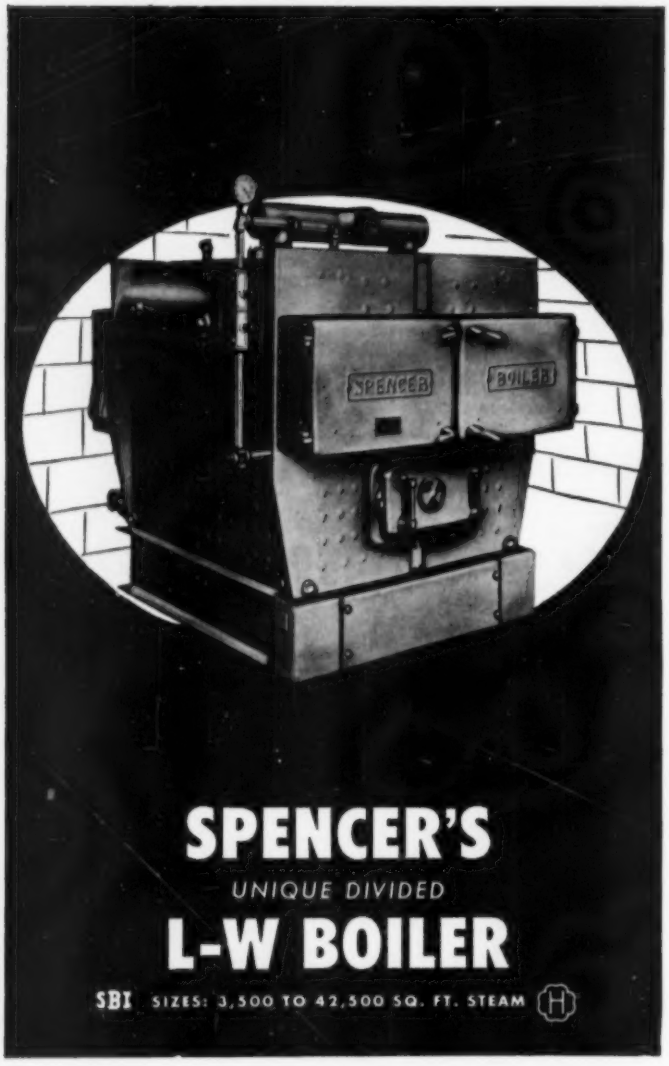

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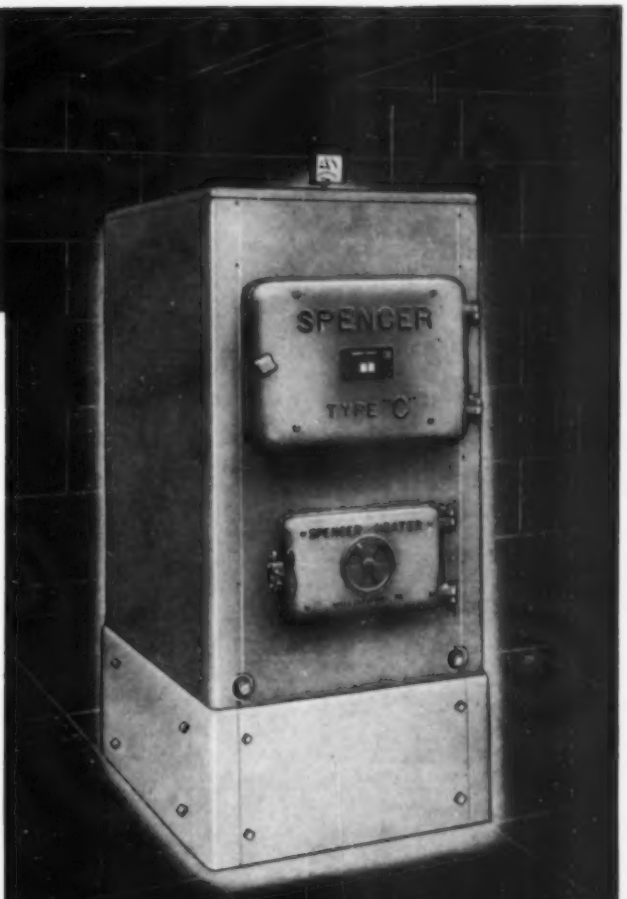

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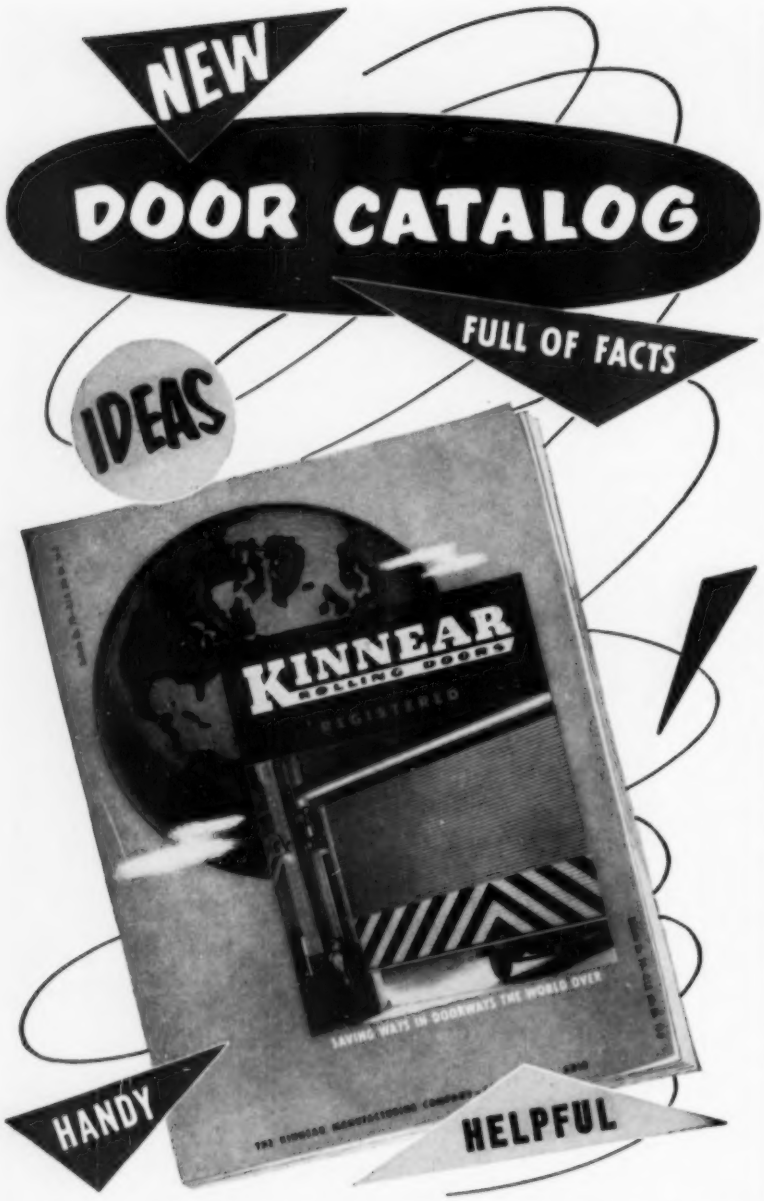

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reviews

(Continued from page 188)

cately colored pages of *The Architectural Review* is largely wasted on noninsular barbarians.

With all the praise for two stimulating contributions to the understanding of architecture and history, goes one serious reproof. It had been hoped that the authors of this new encyclopedia, which we expect will not be simply a rewriting of foreign-language textbooks, would avoid the academic error of confining their material to monumental buildings. The modern student of architecture is passionately interested in ordinary houses, both as expressions of environmental and technological challenges and as expressions of indigenous symbols and traditions. It is puzzling that such important examples as French chatelets and the town houses of the South and the North, and the beautiful middle-class architecture of the Late Georgian and the Regency periods were left out. To know them better would have been a very important mission of these otherwise so-informative books on French and English Renaissance architecture.

SIBYL MOHOLY-NAGY

living with climate

Climate and Architecture. *Jeffrey Ellis Aronin. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N. Y. 1953. 304 pp., illus., $12.50*

Here is an author who "does something about the weather"—a great deal, in fact, as an analysis of his book will show. It pertains to man's attempt to build and live in harmony with climate. Of course, from an historical viewpoint, man has been confronted through the ages with the problem of adapting his dwelling place to climatic conditions. One has only to think of the structures of the Eskimo, the American Indians, the Aztecs, or our own early Colonial settlers. Even the cavemen of prehistoric times undoubtedly sought out only those cozy retreats that were definitely not to windward. So the

(Continued on page 194)

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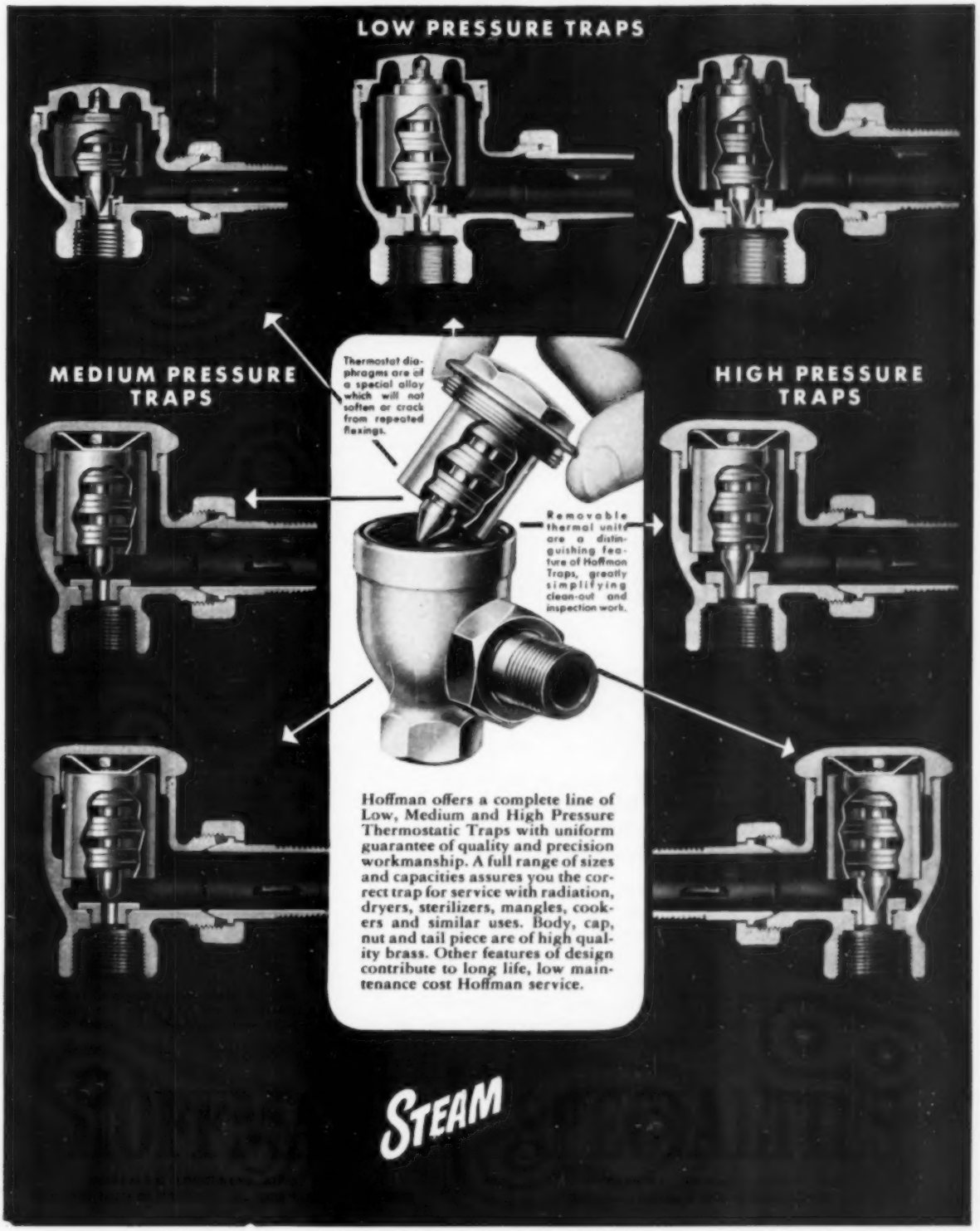
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reviews

(Continued from page 192)

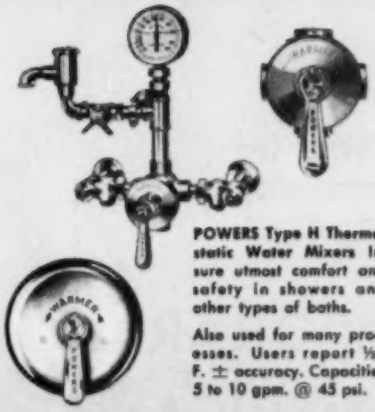
architect, in reality, had been a climatologist long before he acquired a knowledge of all the other professional activities so closely associated with his work, such as economics and engineering and sanitation. Yet, very seldom does one see mention made of this role of the architect or consider that he must be skilled in climatology, despite the fact that the design and orientation of buildings with respect to climate is an ancient—one might say, an instinctive—art.

It is because little training is at present given the student architect in this line and because he considers that the orientation of buildings with respect to climate is a "lost art that modern man does not know" that the author has felt compelled to make it his subject. He is deeply concerned about establishing the architect as a climatologist. He has dubbed this "new science" *airchitecture*. Whether this term will find common usage in the profession and though his viewpoints about a "lost art" may readily be disputed by some practioners, there is no denying that here is a new approach to an old problem and the first time, probably, that anyone has presented so thoroughly the many various ways that climate can influence building design. All of the elements are described minutely so after reading and studying the book, one can easily appreciate what limitations climate imposes.

This book, aside from its comprehensiveness, is unique for its scholarly aspect. Aronin began his climatological studies while at the University of Manitoba, after he had graduated from Hamilton College. His interest in the subject received its first impetus when, in 1946, he was engaged in research activities, under auspices of the Canadian Army which employed services of many of the world's leading scientists, explorers, engineers, and military experts to find the best solution to the problems of living in the severe cold and the climatic conditions of the Arctic. After that rewarding experience, Aronin pursued his investigations of the relationship of climate and architecture at McGill University, in Montreal, where

(Continued on page 196)

Above: POWERS ACCRITEM Temperature Regulator, is water or compressed air operated. Controls FLOWRITE diaphragm valve (right). Widely used for Water Heaters and Industrial Processes.



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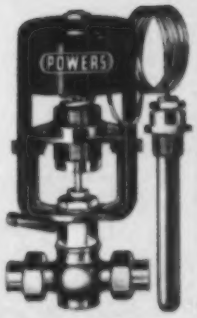

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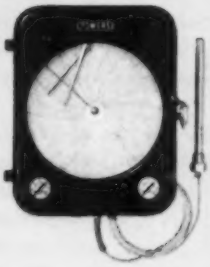

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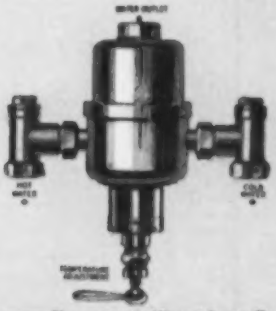

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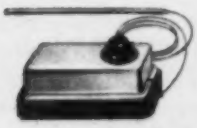

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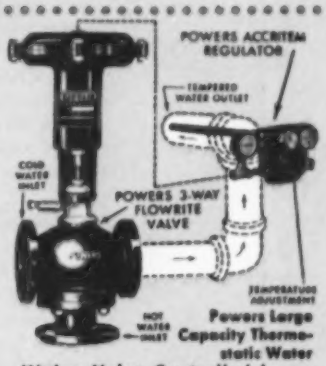

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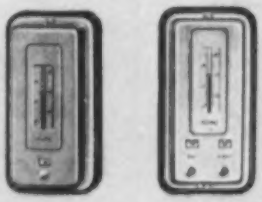

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by *Lewis Mumford*, Writer,
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Mainly by drawing on contemporary documents, Mumford's book presents a history of modern architecture over an entire century. By providing a background of ideas and a tissue of connections in the form of a special introduction by the author, this book will prove of unusual interest and value to the practicing architect, architectural student and general reader.

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reviews

(Continued from page 194)

he received his Master's degree, preparing this work as his thesis.

In his introduction, Aronin sets forth his object: to acquaint architects, architectural students, engineers, city planners, builders, prospective home owners, and others—especially in North America—with the demands and phenomena of the large- and small-scale climate (known respectively as the *macroclimate* and the *microclimate*); and to inform them on application of this knowledge to the design and orientation of buildings and towns.

With that entirely worthy purpose in mind, he then describes the most significant historical efforts made by many peoples in many lands toward co-ordinating building and climatic environment. His research and observations in this direction are noteworthy, starting, as he does, with Vitruvius in the Third Century, showing how his genius influenced many thinkers of his day and of later years, particularly the great Andrea Palladio. Aronin is not unmindful of the inventiveness and the intuitive genius for orientation possessed by the inhabitants of every continent, citing many examples in North and South America and Europe. He pays special and deserved note to the progress in orientation by the peoples of the Far East, notably those of China and Japan, and quotes from such authorities on Oriental building and planning as Jiro Harada, Hideto Kishida, and D. G. Mirams. The author winds up his discourse on the background of orientation with a detailed account of investigations being made at the present time in the relationship of architecture and climate. He is firmly of the opinion that, in spite of the fine heritage that exists in the matter of orientation, it is unfortunate that planners and architects have not taken sufficient advantage of it and that the instinctive sense of orientation—which he considers to be "lost"—should be replaced with the type of scientific research and statistical data on climate that he presents in the succeeding chapters of the book.

Many, no doubt, will agree with his arguments and many may also wonder

(Continued on page 200)

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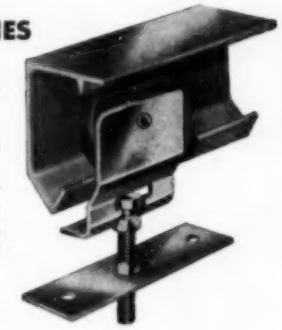

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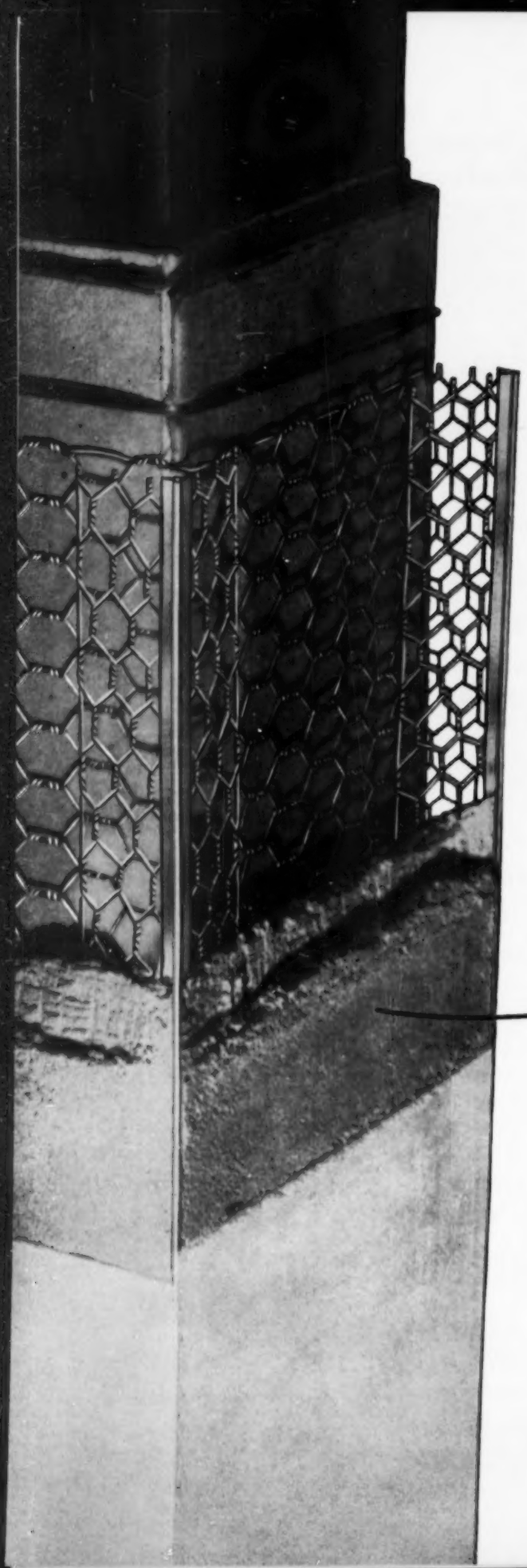

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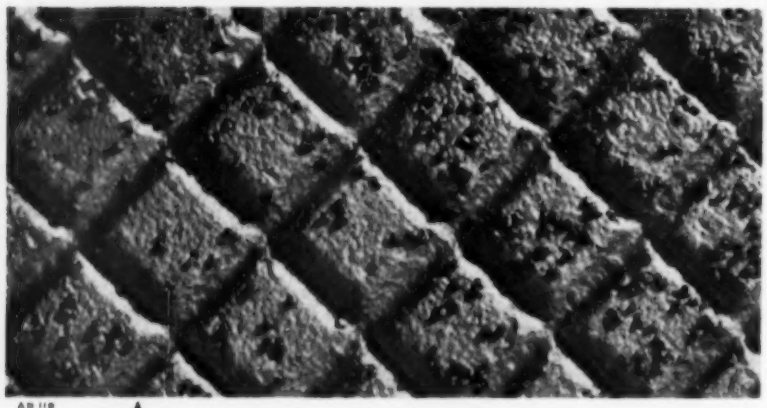

AB 110

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reviews

(Continued from page 196)

how this circumstance has come about. Or, as the author himself asks, "What is the situation today? Why have we momentarily lost sight of the importance of climate in architectrue?" Here is his answer: "Because of increased travel among the nations, people have borrowed one another's 'styles' without properly considering their function or climatic suitability in the position. There was little justification in rendering the form of a Roman bath into Pennsylvania Station, New York." Probably, many will agree with such a viewpoint and perhaps his further argument that "man cannot compete *against* the climate. He must go **along** *with* it" will bring about the renewal of interest in orientation which he so earnestly feels is needed.

In the following chapters of the book, dealing with the sun, temperature, wind, precipitation, and other climatic factors such as lightning and humidity, Aronin has assembled a tremendous amount of the latest and most important information from a variety of authentic sources. There are many charts and graphs and quite naturally he has included the results of his own investigations in the field. He discusses in full detail the physics of the influence of these factors (the sun, temperature, wind, etc.) upon architecture as well as pointing out their beneficial and harmful effects under given conditions. He tells how these climatic factors can be brought under control through the intelligent orientation of building and site and town planning. Although much of this material is of a technical and scientific nature and may be over the heads of the average lay reader, Aronin does provide down-to-earth practical information which should be heeded. In his chapter on the sun, for instance, he describes a great number of architectural shading devices, such as overhangs, balconies, louvers, sun breakers, and even offers a long list of trees and vine that will help provide shade while at the same time affording protection and beauty. He also gives practical advice and solutions to such problems as choosing a site for buildings,

(Continued on page 206)

This bright kitchen features Bermuda Hues in Gold Seal VinylTile on the floors and walls, and VinylTop on the counters made of BAKELITE Vinyl Resins by **Congoleum-Nairn Inc.**, Kearny, N. J.

Now you have greater freedom

for decorative styling

...because BAKELITE Vinyl Resins mean *clean, bright beauty*, even with light-colored flooring.

You can specify flooring in any style-satisfying colors, from light pastels to deep tones, with complete confidence that the *colors will stay bright and true.*

The reason is the easy cleanability of the surface. With flooring made of BAKELITE Vinyl Resins the surface is impervious. Tracked-in dirt, grease, oil, spilled foods, acids and alkalies are strongly resisted. Dirt and stains can accumulate only *on* the surface. They're wiped off easily because penetration is avoided. And the transparent, lustre-enhancing resins don't discolor on aging.

It's a tough surface, too, resisting scuffs, scratches and wear. Yet it is resilient for comfort and to absorb building movement.

For style, service and total economy, make "Made of BAKELITE Vinyl Resins" your standard flooring specification.

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BAKELITE COMPANY, *A Division of Union Carbide and Carbon Corporation* UCC 30 E. 42nd St., N. Y. 17, N. Y.

Extra corrosion resistance— Type 316 stainless is now available in MicroRold®!

Cut your job costs by ordering *Washington Steel MicroRold* Type 316 stainless steel. Remember, job costs are figured on a square foot basis — while material is bought by weight. Why pay a premium for stainless surface area by receiving material on the heavy side of the gauge you order? Special equipment at Washington Steel assures accurate "thinness control" on MicroRold . . . and you can specify that your MicroRold Type 316 be rolled to the light side of the gauge range. You'll save money!

MicroRold Type 316 Stainless is available as follows:

SHEETS

Max. 36" wide No. 4 and 7 Finish .012 to .109
Max. 36" wide 2B and 2D Finish .005 to .078
Max. 36" wide Physicals—(average)

Condition	Annealed
Ultimate Tensile Strength P.S.I.	85,000
Yield Strength (.2% set) P.S.I.	40,000
Elongation in 2 inches, %	55
Rockwell Hardness	B 75-80
Scaling Temperature, °F	1700
Grain Structure	Austenitic-Nonmagnetic

STRIP

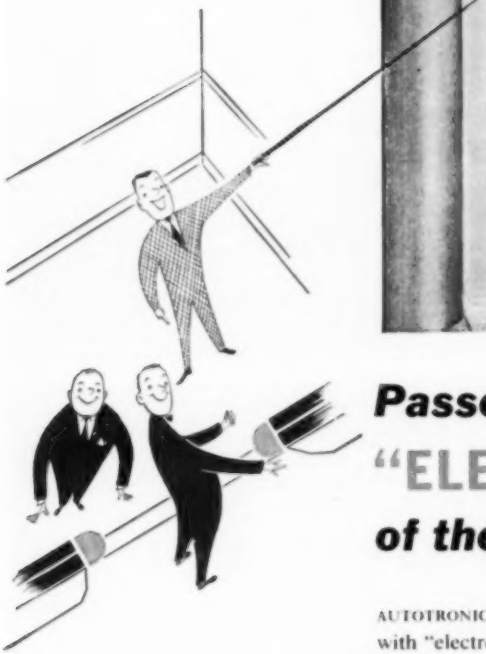
.005 to .078, in No. 1 and No. 2 Finish
.0015 to .009 (Veri-Thin), up to 23 15/16" wide, Bright Annealed

Ask your steel warehouse distributor about MicroRold Type 316 Stainless—widely used throughout the chemical industry and wherever applications must resist salt spray, damaging industrial fumes, acid salts and reducing acids. It will pay you to get full details now!

Washington Steel CORPORATION
WASHINGTON, PENNSYLVANIA

SPEEDS
NORMAL
DOOR
CLOSING

PREVENTS
DELAYS
AT
LANDINGS



Passengers like the "ELECTRONIC POLITENESS" of the doors

AUTOTRONIC® elevatoring closes elevator doors automatically with "electronic politeness." A zone of detection extends along, across, and a short distance in front of the leading edges of both car and hoistway doors. The presence of passengers within the zone is detected electronically. This three-dimensional zone extends only a few inches in advance of the doors. Doors are stopped and reversed only when there is the possibility of interfering with passengers as they enter or leave the car. Door closing is speeded. The closing action is so smooth, silent, and automatic that passengers are seldom aware of door movement.

If a talkative passenger delays door closing too long, the doors gently, but firmly, nudge him out of the doorway.

Otis AUTOTRONIC elevatoring saves up to $7,000 a car, each year. It is suitable for office buildings, department stores, hotels, and hospitals. Why not visit a new or modernized installation? Ask any of our 268 offices for details. Otis Elevator Company, 260 11th Avenue, New York 1, N. Y.

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Alabama Beautifies its State Capital with Architectural Concrete

In 1937 the State of Alabama built its Highway Department Building (above) with architectural concrete. It was so pleasing the Archives and History Building (upper right) followed in 1940.

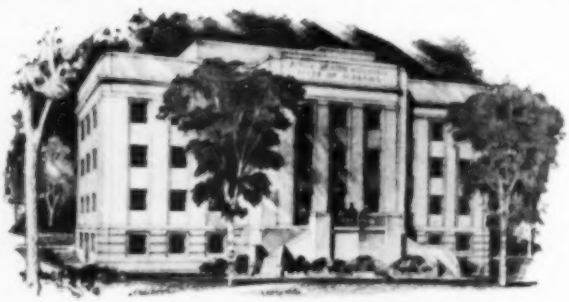
When it was decided, a decade later, to build additional structures, the beauty and outstanding performance of the Highway and Archives Buildings led to the choice of architectural concrete again. The State Office Building (middle right) now is being built. Construction of the Public Health Building (lower right) starts this year.

These structures in Alabama's capital illustrate the beauty and adaptability of architectural concrete for public buildings. It is equally adaptable to schools, hospitals, apartments, churches and industrial and commercial buildings.

Architectural concrete fulfills every structural requirement too—durability, strength, firesafety, low maintenance expense and ***low annual cost.***

More and more architects are discovering that architectural concrete is the ideal medium for giving form to their finest designs. For more information write for free, illustrated literature, distributed only in the United States and Canada.

Architects: for Health Building, Charles H. McCauley, Birmingham; for others, Warren, Knight & Davis, Birmingham. Structural engineers: for Health Building, Strickland and Associates, Birmingham; for others, Carl Wilmore, Birmingham. Construction: Highway and Archives Buildings, WPA; State Office Building, Ray M. Lee Company, Atlanta, Ga.; Health Building, Batson-Cook Company, West Point, Ga.



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A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work

Martin Luther Christian Day School, Pennsauken, New Jersey, featuring Lupton Master Aluminum Windows.

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Contractor: Mark V. Kane, Merchantville, N.J.

At Last! All-Season Windows for Schools

Come Spring . . . and the Lupton Master Aluminum Window with open-out ventilators shields against rain and bad weather.

Come Summer . . . and you get unsurpassed ventilation with air flow easily controlled through projected ventilators.

Come Fall . . . and the slim frames and narrow muntins admit maximum daylight as the days grow shorter.

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School boards and school executives like the extremely low maintenance cost of Lupton Master Aluminum Windows. They never need paint. Will not warp, swell, shrink or rattle. They save money through years of trouble-free service. See the full line of Lupton Steel and Aluminum Windows in Sweet's. If you have a specific window problem, take advantage of Lupton's 40 years in the manufacture of metal windows.

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LUPTON METAL WINDOWS

Member of the Steel Window Institute and Aluminum Window Manufacturers' Association

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ALUMINUM OR STEEL

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DOUBLE HUNG WINDOW

New
Completely Assembled, Attractively Priced, 1" Cylinder Lock
(CAN BE MASTER-KEYED)
Desco Doors
for every remodeling or new construction project

Standard Models

#54—1¾" x 2" Extruded Slim-Line.
#55—Slim-Line Rails with 3" Top and 5" Bottom.
#56—Heavy Duty 1¾" x 3" Sides and Top with 5" Bottom.
#59—Heavy Duty 1¾" x 3" Sides and Top with 12" Bottom.
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Also Custom Doors

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Please send free ☐ Desco catalog; ☐ Half-size details on Desco doors, frames and store fronts; ☐ Full-size details.

NAME .....
STREET .....
CITY & STATE .....

reviews

(Continued from page 200)

how to avoid snow shoveling, how to keep a dry basement and a dry area around the house, and other matters the builder must face.

Like any objective work of this sort, *Climate and Architecture* will probably cause much discussion as to its really practical value in the broad realm of architecture, where so many factors are apt to overshadow the purely scientific and technical. However, it will be readily conceded that the author is quite justified in his hope that his book will be of interest not only to experts but also to students and the layman—the man now living in or proposing to build his own house. Whether it is used as a textbook or as a reference, this volume will be of great profit to anyone genuinely concerned with the relationship of climate and architecture. The author does not prescribe an out-and-out formula for the architect, since every situation is different. But he believes there are basic ingredients which can be integrated and varied to suit individual needs and tastes and he lists eight simple suggestions that are worthy of note for the professionals.

Aside from the text, with its charts and diagrams and tables, the more than 300 carefully selected illustrations augment admirably the various points the author stresses. These, along with the complete index and the exceedingly exhaustive bibliography, make this volume a standard work in the particular field. The book should "let us learn how to live with climate, not in opposition to it."

FRANK A. WRENSCH

furniture survey

Furniture for Modern Interiors. *Mario Dal Fabbro. Reinhold Publishing Corp., 330 W. 42 St., New York 36, N. Y., 1954. 207 pp., illus., $7.50*

Material for this book was chosen on the basis of originality of design, innovation in technical solutions, apt application of new materials, adaptability of the design either to custom manufacture or to mass

(Continued on page 210)

Balance!

CENTER MOUNTING
Is an exclusive feature of Kennatrack sliding door hardware. Combined with even distribution of door weight over 8 nylon wheels, center mounting assures effortless operation and minimizes likelihood of warpage.

KennatracK
SLIDING DOOR
HARDWARE

Secret of quick, trouble-free sliding door installations is *selecting the right type of hardware.* SEND FOR FREE COPY of the KENNATRACK "Buyer's Guide," A book that takes the guesswork out of sliding door installations! Kennatrack Corporation, Elkhart, Indiana.

Here's why more and more of America's famed buildings are installing the Yorkaire system of air conditioning

The YORKAIRE SYSTEM brings new standards of comfort to the modern miracle of air conditioning, yet see how simple it is, how easy to understand! . . .

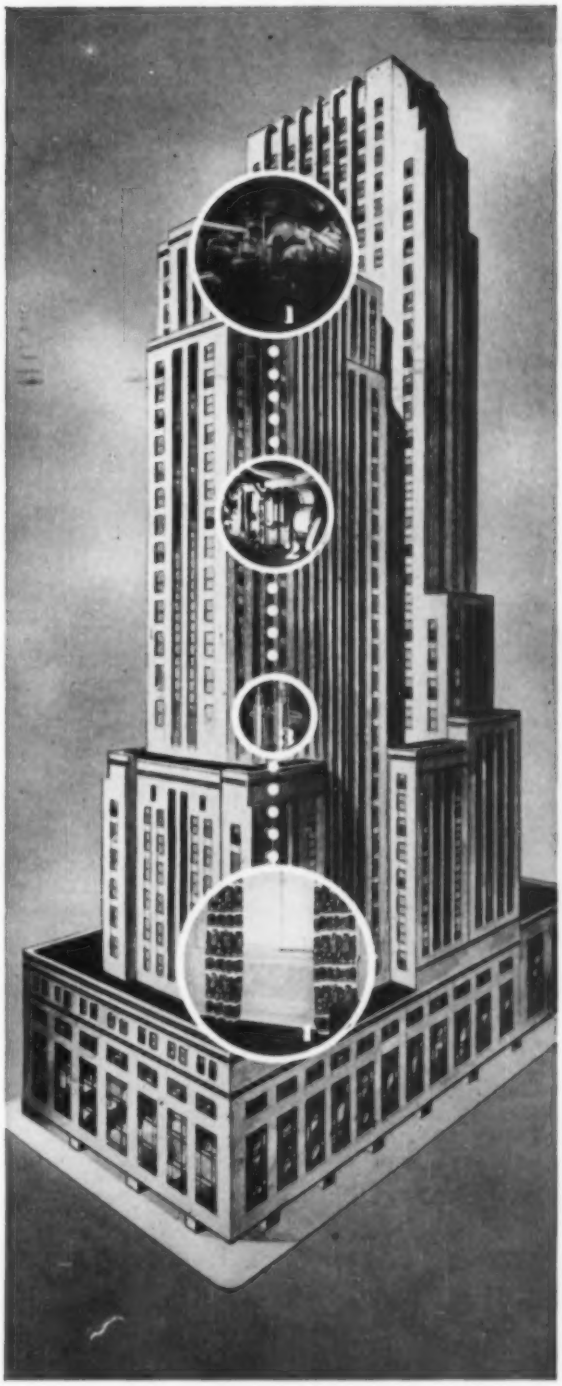
1. Source of comfort cooling is the famous and rugged York Turbo Water Cooling System which may be located on the roof of the building or in the basement.

2. Great volumes of air are brought into the building from outdoors at convenient points. This "raw" air is filtered, washed, cooled or heated, and conditioned for the right amount of moisture. When it's "just right for comfort," it begins its swift, silent journey to you.

3. Through small, space-saving, tightly sealed tubes the conditioned air is sent under mild pressure, branching out at each floor to the individual rooms. At the same time, small pipes carry hot water in winter and cold in summer to help you obtain the temperature you want.

4. In room units under the windows the air tube and water pipes converge. These units distribute the conditioned air in a gentle, quiet stream. A simple control allows you to refine the temperature to the conditions you desire, with no mixture of air from other rooms.

YORKAIRE SYSTEMS of Air Conditioning are being installed in building after building, old and new, across the country.



air conditioning by york

. . . Recent contracts include these famous buildings—Mile High Center, Denver; Netherland-Plaza Hotel, Cincinnati; Fulton National Bank, Atlanta; Equitable Life Assurance Society, San Francisco; Esso Standard Oil Company, Philadelphia. If you are not now enjoying this healthful comfort, perhaps you will, sooner than you think.

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HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

WHEN REMODELING—SPECIFY KENTILE

the asphalt tile floor of enduring beauty

Photograph: MAURICE BAUMAN — *Interior Design:* F. STANLEY HAGGART

KENTILE MAKES REMODELING EASIER...gives new opportunity to turn dull, drab offices into modern, eye-catching ones like the one shown above. Specify KENTILE on your next job...for a new high in client satisfaction.

A.I.A. 23-G

When you specify KENTILE for remodeling jobs, you're saving time, work and money for everyone concerned. The initial cost is low...installation is quick, easy and trouble-free...maintenance exceptionally simple and economical. And, because the light, bright KENTILE colors go clear through the rugged, wear-resistant tiles, they can never wear off...go on bringing modern beauty to any room for years and years of hardest daily service. Yes, it will pay you to choose KENTILE for every remodeling, redecorating and renovating assignment...whether one room in a suburban store—or all the offices and corridors of a metropolitan skyscraper.

Specifications and Technical Data

INSTALLATION: Over any smooth, firm interior surface free from spring, oil, grease and foreign matter...over metal, wood, plywood, concrete, radiant heated concrete slab, concrete that is in direct contact with the earth; on or below grade.

THICKNESSES: KENTILE is available in two gauges: 1/8" for residential and most commercial uses—3/16" for industrial use and where extra-heavy duty flooring is needed.

SIZES: Standard tile size is 9" x 9".

SPECIAL KENTILE: Greaseproof asphalt tile for industrial use in a wide range of marbleized colors—extremely resistant to petroleum and cooking greases and oils, alcohols, alkalis and most acid solutions.

Samples and Technical Literature available. Write the Kentile, Inc. office listed below for samples and information desired, or contact the Kentile Flooring Contractor nearest you. He's listed under FLOORS in the Classified Phone Book. And, be sure to request samples of ThemeTile die-cut inserts, colorful Feature Strip and KenBase.

Approximate Installed Prices (per sq. ft.)

	1/8" Gauge	3/16" Gauge
KENTILE: A Colors	20¢	25¢
KENTILE: B Colors	25¢	30¢
KENTILE: C Colors	30¢	40¢
KENTILE: D Colors	35¢	40¢
SPECIAL KENTILE	40¢	50¢

These costs are based on a minimum area of 1,000 sq. ft. over concrete underfloor. Color groupings range from Group "A," the darkest solid colors...to Group "D," the lightest marbleized colors. Special Kentile is available in Regular and DeLuxe Colors.

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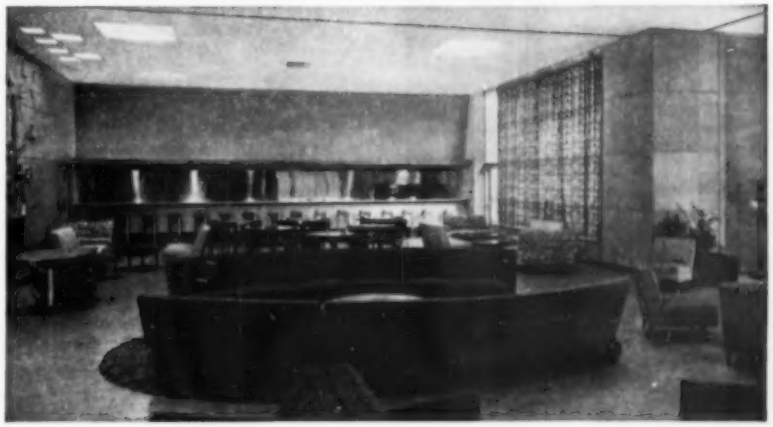
watch these walls...

go into hiding!

By using "Modernfold" doors this student lounge can easily handle up to three separate activities at a time. Yet when the time comes to turn it back into an all-purpose area, room divisions literally disappear! Recessed pockets behind the wall panels hold the "Modernfold" doors completely hidden—but instantly available. Just another example of how architects are using "Modernfold" doors to achieve efficient—and attractive—use of space.



Your ideas come to life... for life with "MODERNFOLD" doors

For every room division or door closure problem, there's a simple, economical, space-saving solution. That's "Modernfold," the original folding door.

Specifying "Modernfold" doors keeps clients happy. For these steel framed, vinyl-covered doors can't be equaled *anywhere* for quality of design...for quality and strength of materials.

And because this line is *complete*, you're sure to save time and get exactly what you want when you specify better looking, easier operating, longer lasting "Modernfold" doors.

Sold and Serviced Nationally

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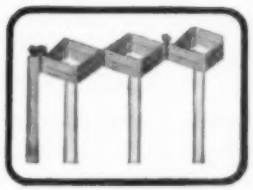
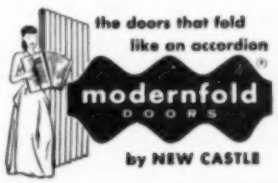
Better Looking
Fabric covering conceals all operating mechanism. No cornice needed. Adjustable trolleys keep doors hanging flush to jamb.



Longer Lasting
Balanced hinge construction both top and bottom. Trolleys attached at hinge intersections. No sidewise twist or pull possible.

Better Background
Over 100,000 "Modernfold" doors now in operation—a backlog of space engineering experience that's your guarantee of satisfaction.

YOU CAN'T GET MORE IN A FOLDING DOOR



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☐ Please send full details on "Modernfold" doors.

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City.....*County*.....*State*.....

Saving space is an important element in washroom design. Modern, functional, Scott-designed Fixtures help eliminate traffic-jams—make for cleaner, easier maintenance.

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Please send me your full-color booklet.

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Address_____

Company_____

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reviews

(Continued from page 206)

production, and the significance of the piece in the evolution and direction of design in its country.

Examples were chosen from all over the world. They are presented first by photographs and pen-and-ink drawings of furniture groupings. PART II presents pieces individually by classifications, e.g., chairs, tables, etc. Captions explain why the furniture is important, design-wise, and drawings include measurements. Anyone interested in furniture or its design should have this record for enjoyment and reference. P. B.

collected examples

Commercial Buildings. *An* Architectural Record *Book. F. W. Dodge Corp., New York, N. Y., 1953. 416 pp., illus., $9.75*

This is a collection of examples of commercial buildings previously shown in The *Architectural Record*, which is published by the same company. Although the title might indicate that the whole field of commercial design is illustrated and discussed, only five building types are in evidence: office buildings, banks, transportation buildings, radio and TV buildings, and theaters. J.K.

notices

new associates

CHURCH, NEWBERRY & ROEHR, Architects, announce KURT P. SCHUETTE as an Associate at 619 Builders Exchange Bldg., Portland 4, Ore.

ROBERT Y. FLEMING, FRANK C. REPULT, JR., GERALD B. STRATTON have been made associates in the firm of THOMAS F. FAIRES & ASSOCIATES, Architects, 1027 Falls Bldg., Memphis, Tenn.

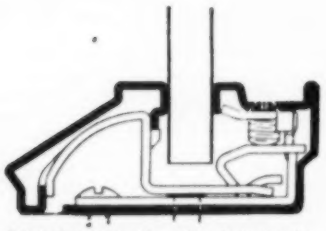
RICHARD WHITEMAN has been made an Associate in the firm of JYRING & JURENES, Architects-Engineers, 1932 Fifth Ave. East, Hibbing, Minn.

Brooklyn Landmark Becomes WORLD'S LARGEST VARIETY STORE

◄ Old Loeser Dept. Store—Courtesy of the Brooklyn Eagle

Archts. McCrory Stores, Inc.—Associated Archts. Sohn & Weston

Remodeled with BRASCO CONSTRUCTION



Safety-Set Sash No. 109. Note height, only 25/32". Detail actual size also shows simplified, positive Brasco Setting Mechanism and deeper, safer grip on glass.

HERE'S another striking example of the adaptability of Brasco Construction for either new or remodeled fronts, in fact for *any* type of store front you plan. The Brasco line offers wide versatility for distinctive entranceways too. Practically any architectural design, ultra-modern or conservative, can be faithfully executed in Brasco metal without costly special fabrication. Brasco Safety-Set Store Fronts are available in both heavy gauge stainless steel and anodized aluminum.

Brasco Aluminum Entrances with de luxe features, are all-extruded with a fine, lasting anodized finish. And for economy, the *new* Brasco Jr. Entrances offer outstanding quality and appearance at budget prices. For complete information and construction details write Dept. P 405.

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Metal Store Front Specialists for more than 40 Years

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SITUATIONS OPEN

SENIOR ARCHITECTURAL DRAFTSMEN—a well-established metropolitan New Jersey firm has several excellent opportunities for top-notch men looking for permanent positions. Men with experience in all phases of institutional building would be preferred. In replying, give full information on education, experience, starting salary, availability, age, etc., or phone. Emil A. Schmidlin, Architect, 586 Central Avenue, East Orange, N. J. ORange 7-0070.

ARCHITECT-SUPERINTENDENT — for employment in Omaha, Nebr., with architectural and engineering firm. Must have had 6 to 10 years' experience in responsible positions as architect or superintendent on building construction. Must be under 40 and preferably a college graduate. 40-hour, five-day week. Insurance and profit-sharing pension plans. Two weeks annual vacation. State salary requirements. Box 105, PROGRESSIVE ARCHITECTURE.

WANTED — experienced architectural draftsman for commercial and institutional work in a medium-sized architectural and engineering office in west Texas. In reply state qualifications, age and salary expected. Box 106, PROGRESSIVE ARCHITECTURE.

UNUSUAL OPPORTUNITY FOR CHIEF DRAFTSMAN—designer of superior qualifications with progressive southwestern architect; commercial and industrial work; salary open. Should do authoritative modern design and have executive ability to direct ten to twenty draftsmen. Box 107, PROGRESSIVE ARCHITECTURE.

WANTED—a person, with experience to work in a small office specializing in progressive design of miscellaneous types of architectural projects; churches, schools, clinics, and residential work, predominating at present. Salary commensurate with ability to produce. Located on the Atlantic coast of North Carolina. Box 108, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL DRAFTSMEN—wanted with educational and institutional experience. Squad leader and specification writer also wanted. Opportunity for advancement in progressive firm in eastern Pennsylvania. Write giving education, qualifications, experience, etc., to Box 109, PROGRESSIVE ARCHITECTURE.

EXPERIENCED ARCHITECTURAL DRAFTSMEN—wanted capable of producing preliminary sketches and developing good working drawings. Permanent position with well-established firm. Excellent working environment, liberal employee benefits. Located in rapidly growing community in an ideal climate. Louis G. Hesselden, A.I.A., P. O. Box 803, Albuquerque, New Mexico.

ARCHITECTURAL DRAFTSMEN AND STRUCTURAL ENGINEERS — Old-established firm, good pay, interesting work. Give age, experience and salary desired. Tinsley, Higgins, Lighter & Lyon, Liberty Bldg., Des Moines, Iowa.

Advertising Rates

Standard charge for each unit is Five Dollars, with a maximum of 50 words. In counting words, your complete address (any address) counts as five words, a box number as three words. Two units may be purchased for ten dollars, with a maximum of 100 words. Check or money order should accompany advertisement and be mailed to Jobs and Men, c/o Progressive Architecture, 330 W. 42nd St., New York 36, N. Y. Insertions will be accepted not later than the 1st of the month preceding publication. Box number replies should be addressed as noted above with the box number placed in lower left hand corner of envelope.

EXCELLENT OPPORTUNITY—available for architect, 45 years or younger, in permanent, key position with project building firm in the midwest, vertically organized and containing within the firm financing, planning, construction, management and sales operations. Box 110, PROGRESSIVE ARCHITECTURE.

ARCHITECT—qualified to supervise and direct preparation of working drawings and details. Midwest office specializing in schools and hospitals. Averaging ten men. Personal interview with applicant having ability and experience for top salary. Permanent if qualified. All replies confidential. Box 111, PROGRESSIVE ARCHITECTURE.

ARCHITECT—licensed N. Y. young man as associate in established engineer's office. East central N. Y. Excellent possibilities, your future depends on your work and yourself. Self employed responsibilities. Full particulars. Box 11, PROGRESSIVE ARCHITECTURE.

SITUATIONS WANTED

ARCHITECT—registered in various States, creative designer, administrator, and organizer. Thirty years' experience in architecture, wishes position or association with progressive firm of architects, engineers, developers or investors, at home or abroad. Box 90, PROGRESSIVE ARCHITECTURE.

SENIOR ARCHITECTURAL DRAFTSMAN — 13 years' experience. Presently employed in supervisory position in Canada. Desirous of locating in United States. Available July 1st. Box 113, PROGRESSIVE ARCHITECTURE.

ARCHITECT—45, registered NCARB certificate, registered structural engineer, degree, wide experience in directing work on institutional, commercial buildings, and large industrial plants. Seven years with present employer. Desire position with more self-determination and responsibility with industry or professional office. Will consider overseas work. Box 114, PROGRESSIVE ARCHITECTURE.

ARCHITECT—experienced in sketches, specifications, supervising work of others and assuming charge of office. Connected for many years with all types and sizes of projects, affording best of references. Desire position of responsibility and opportunity. Give details in reply. Box 115, PROGRESSIVE ARCHITECTURE.

ARCHITECTURAL ENGINEER—29, married, desires to relocate in central Colorado due to health of son. Five years' experience in development of architectural working drawings, structural design, field supervision and affiliated work. Varied experience includes hospitals, schools, churches, gymnasiums, parochial and public buildings, commercial and industrial. Box 116, PROGRESSIVE ARCHITECTURE.

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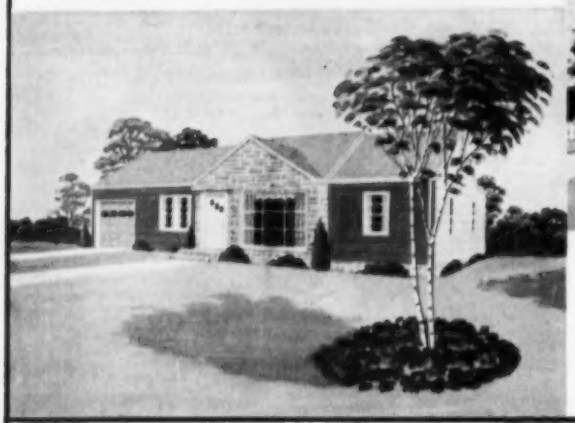

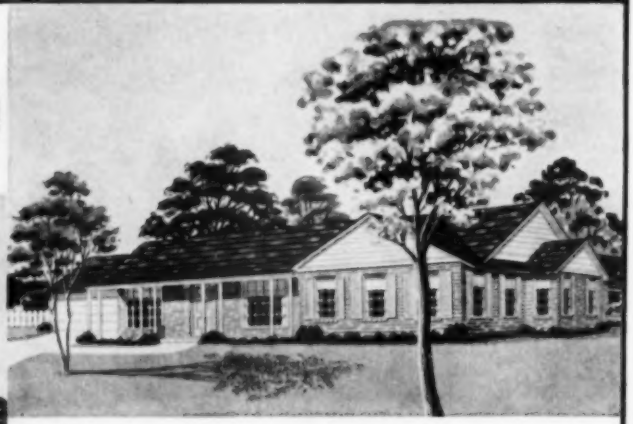

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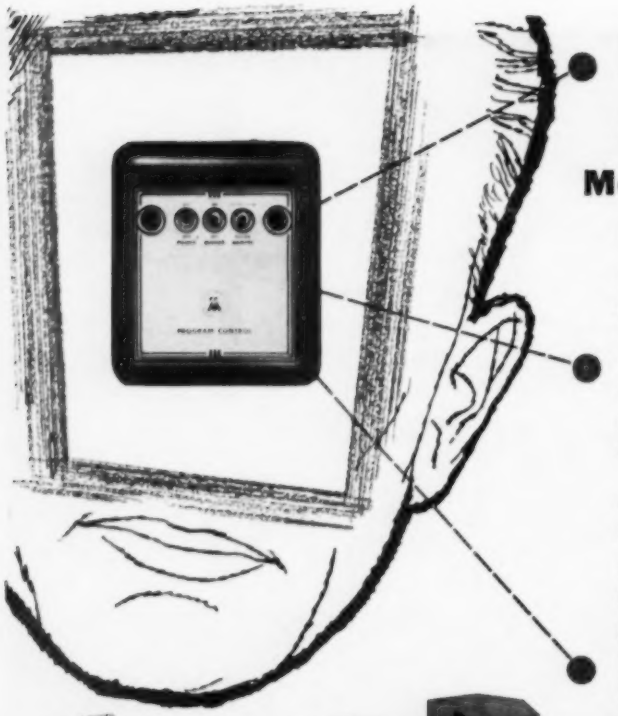

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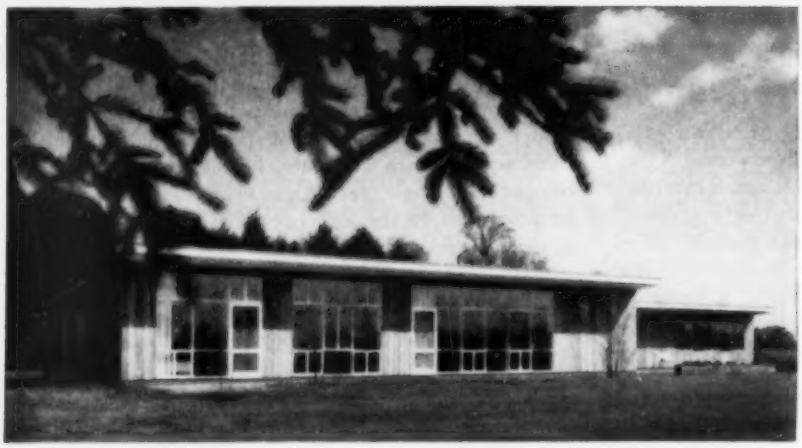

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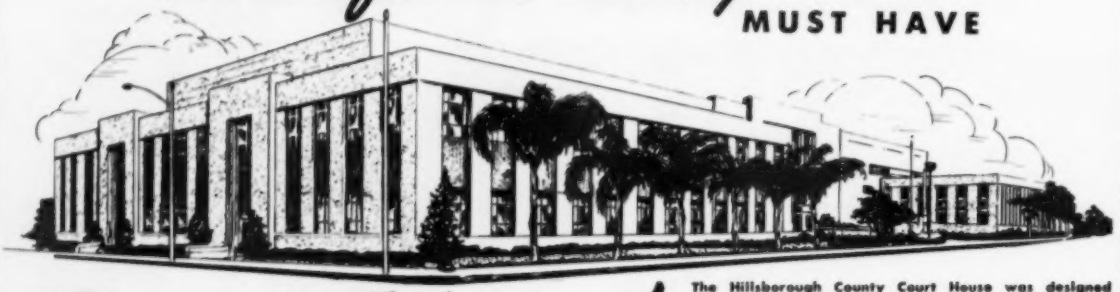

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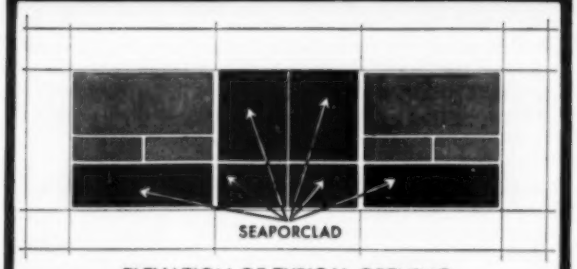

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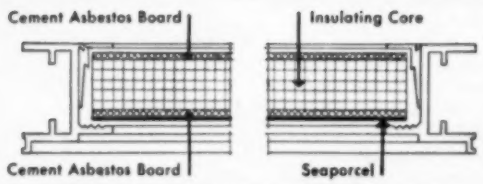

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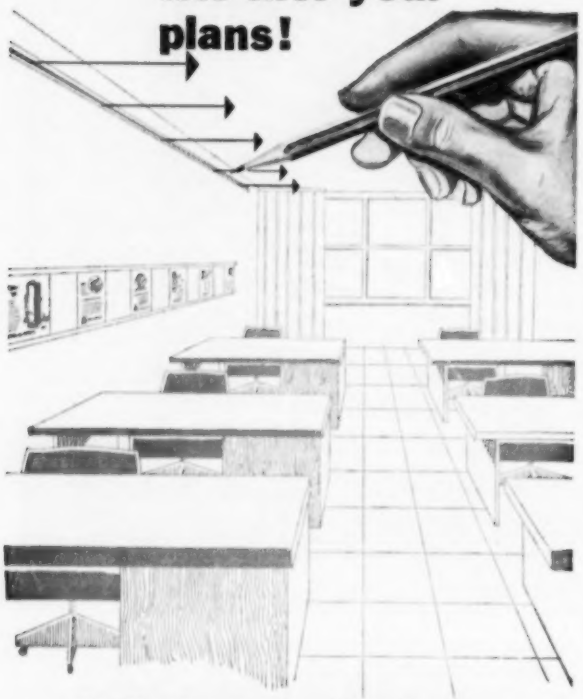

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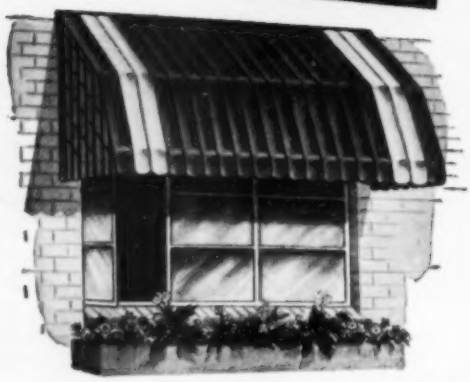

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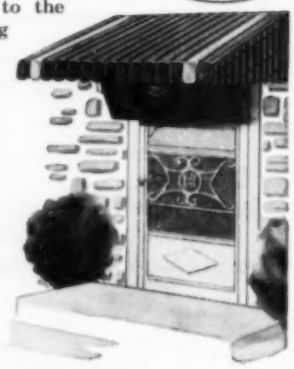

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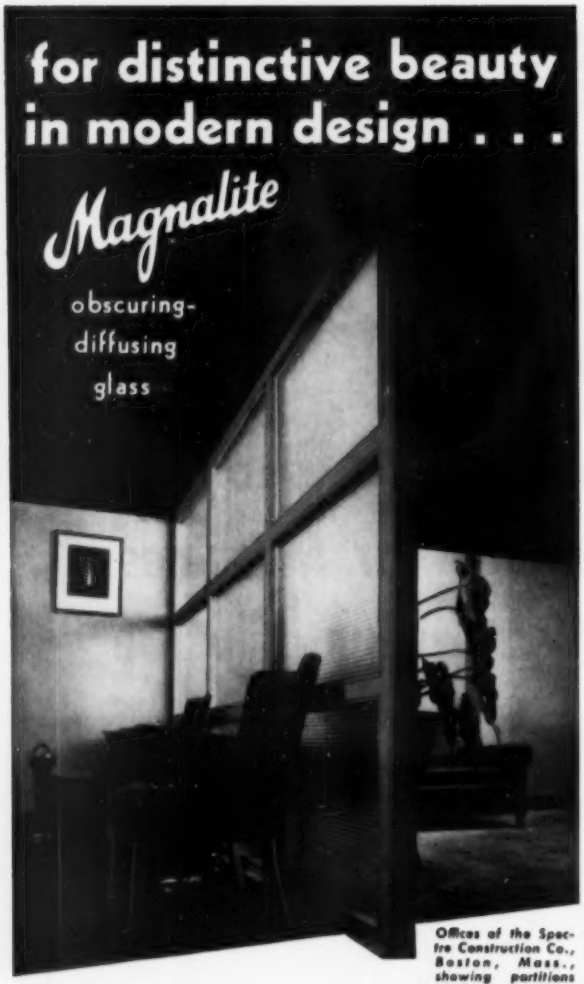

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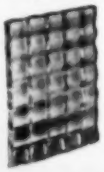

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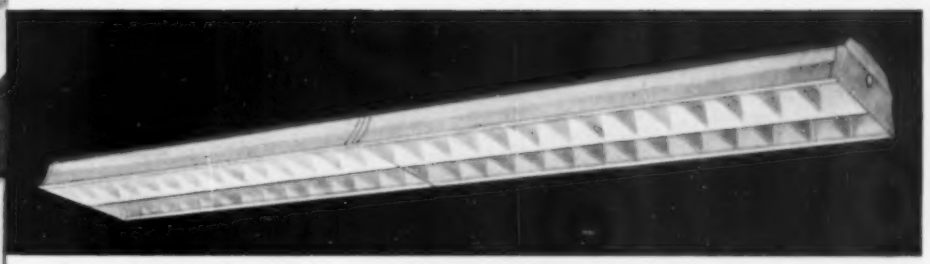

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Electro Silv-A-King, one of the industry's most comprehensive sources for every type of lighting, offers you two manufacturing and shipping points to insure rapid delivery of Fluorescent, Incandescent and Floodlighting fixtures for commercial and industrial use, indoors and outdoors. Only Electro Silv-A-King also offers you the "Basic Unit" which permits easy interchangeability of 7 luminaries on one basic chassis . . . and the "One-Man" Speedy Hanger that cuts installation man hours in half.

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THE CHALKBOARD designed for

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- BETTER WRITING
- BETTER ERASING

LITESITE is a refreshing green. Visually correct, it adds to classroom lightness and brightness. It is easier on student's eyes—teachers get better response. Available in Hyloplate Litesite, Sterling Litesite, and Hyloprest Litesite—three highest quality chalkboards, manufactured by Weber Costello.

ALPHASITE® POLYCHROMATIC CHALK

A Perfect Chalk for the Perfect Chalkboard

A golden ivory chalk which provides a soft, restful eye-saving harmonious contrast when used on Litesite Chalkboard. Cleaner, writes more smoothly, erases more easily. Any chalk can be used on Litesite, but Alphasite is "tailor made" for it.

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WEBER COSTELLO COMPANY
MANUFACTURERS - CHICAGO HEIGHTS, ILL.

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DOUBLE-HUNG CASEMENT PROJECTED AWNING

WINDOWS

Lower maintenance costs, no painting, easy operation, years of trouble-free service . . . these are a few of the benefits your clients get with "Quality-Approved" aluminum windows . . . windows that have been tested for quality, strength, construction and minimum air infiltration.

For detailed specifications and names of manufacturers, consult Sweet's 16a/ALU or write direct to

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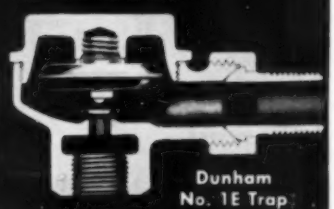
Why you can't clog

DUNHAM RADIATOR TRAPS



You can tell at a glance why this Dunham Radiator Trap always assures easy passage of air, water, foreign matter.

Note, for instance, the extra-large, non-clogging valve seat opening—unrestricted by any guide. Also, that there are *no bellows to clog or stick.*

Dunham's factory-set Monel metal thermostatic disc with stop shoulder construction assures correct operation *without* field adjustment. Sealed under high vacuum, it gives positive response to temperature and pressure changes.

Made in 3 sizes; 6 patterns; 200 to 700 EDR.

For all the facts WRITE FOR BULLETIN PA-5.

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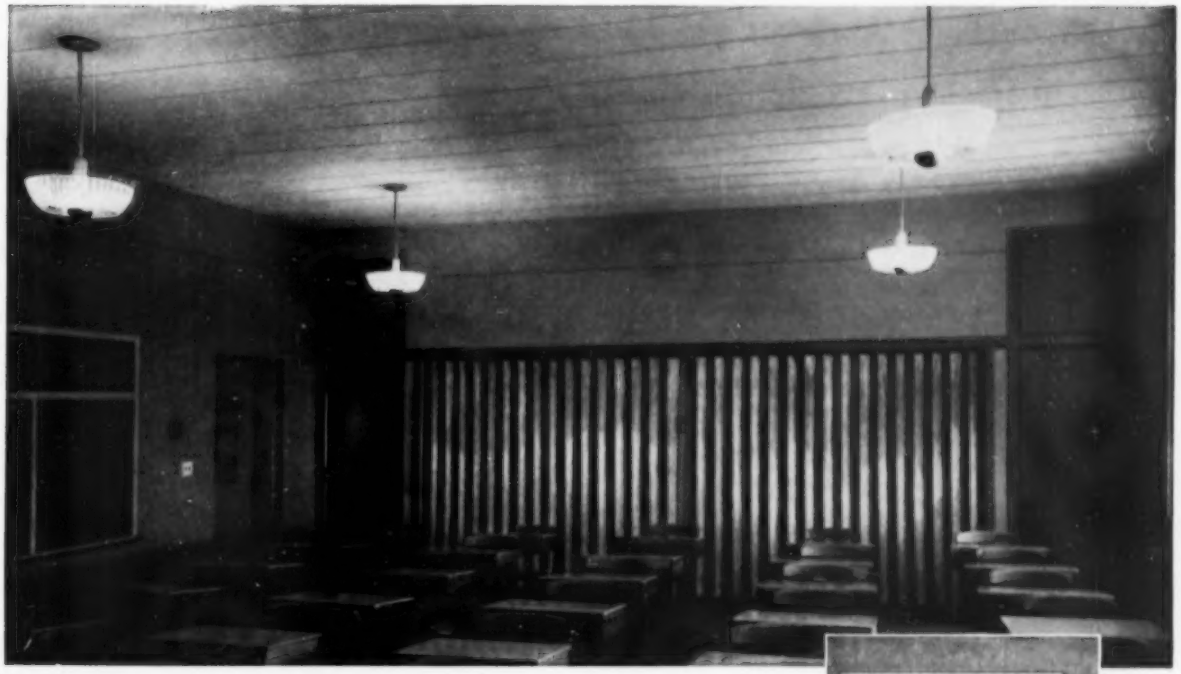
Fenestra 50 YEARS OF BUILDING PRODUCT LEADERSHIP

"A salute to those who made it possible" ✻



Here is a typical Fenestra Structural-Acoustical Ceiling in St. Mary's School, Port Washington, Wis.
Architect: Mark Pfaller Associates, Milwaukee, Wisconsin.
See the great Fenestra Exhibit at Booth 35 at the AIA Convention in June.

New Acoustical Structural "D" Panels. Width 24". Depth 1½" to 7½".

Unique Acoustical Product Saves $26,000 in New School!

Look at this paragraph from the *Magazine of Building* article entitled, "Structural Economy"!

> "Light-gauge, welded acoustic steel deck, a double-duty, factory-built material, saved 59c per sq. ft. ($26,000 in all). It was erected in only ten working days, replaced separate roof deck and framing and eliminated acoustical ceilings and plastering."

The structure was the Central High School in Kenosha, Wisconsin. The architect was Lawrence Monberg.

And the "factory-built material": Fenestra* Acoustical "AD" Panels! A Fenestra Structural-Acoustical "AD" Panel is a box beam with a flat surface top and bottom. The top surface of the panel is the subfloor or support for finished roofing. The perforated bottom surface forms the ceiling. Inside the box beam is glass fibre insulation.

Why not cut your own building costs with a Fenestra combination structural-acoustical ceiling. It goes up *fast*—the panels lock together simply and quickly, saving days of labor and a lot of money. It is practically indestructible. Bumps and knocks can't hurt it. The acoustical efficiency is not affected by washing or painting. And these panels are *noncombustible!*

For further information call your Fenestra Representative. Or write Detroit Steel Products Company, Dept. PA-5, 3409 Griffin St., Detroit 11, Michigan.

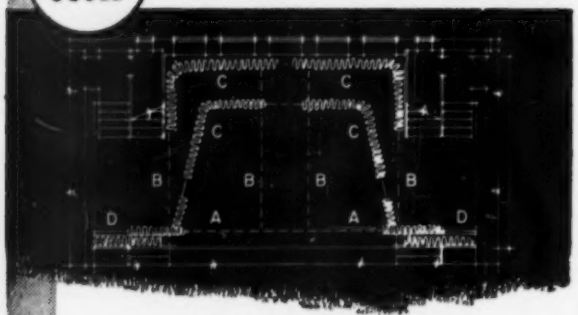
*Trademark

✻ Your need for a maintenance-free, noncombustible, built-in acoustical treatment encouraged us to develop Fenestra Structural-Acoustical Building Panels—a great advancement in building products.

Fenestra | METAL BUILDING PANELS

GOULD

SOLVES SCHOOL SPACE PROBLEM



School stage and four classrooms!

PROBLEM: To get maximum use of space in small overcrowded school.

SOLUTION: a) Gould Monarch Stage Curtain Track across proscenium. b) Separators—Gould Brass Channel Track recessed in plaster ceiling. c) Double cyclorama of Gould's flexible Heavy-Duty Aluminum I-Beam, with drop-out pieces at the crossings. Entire cyclorama track removable, and curtains transferable to separator tracks. d) Gould 1200 Steel Channel Track at auditorium doors and all windows

MORAL: Gould drapery hardware is a design tool, saving expense, providing many helpful solutions to today's problems.

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THE GOULD MERSEREAU CO., INC.
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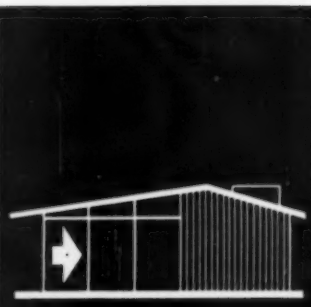

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Custom quality at mass production prices! Arcadia now manufactures its stock doors in basic units. Order as many basic units as you wish! Combine various widths to fill any opening you specify!

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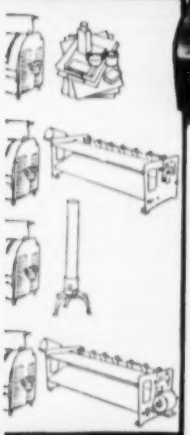

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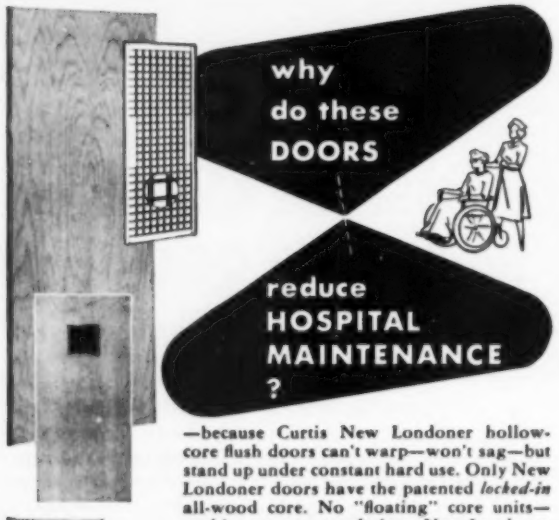

why do these DOORS reduce HOSPITAL MAINTENANCE ?

—because Curtis New Londoner hollow-core flush doors can't warp—won't sag—but stand up under constant hard use. Only New Londoner doors have the patented *locked-in* all-wood core. No "floating" core units—nothing to get out of place. New Londoner doors, too, are supremely beautiful—grain patterns on panels come book-matched and in other pleasing variations. You have a choice in birch, maple, oak and other woods. Curtis New Londoner doors are made in extra widths for hospital use. Write for literature.

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HOLLOW-CORE
FLUSH DOORS
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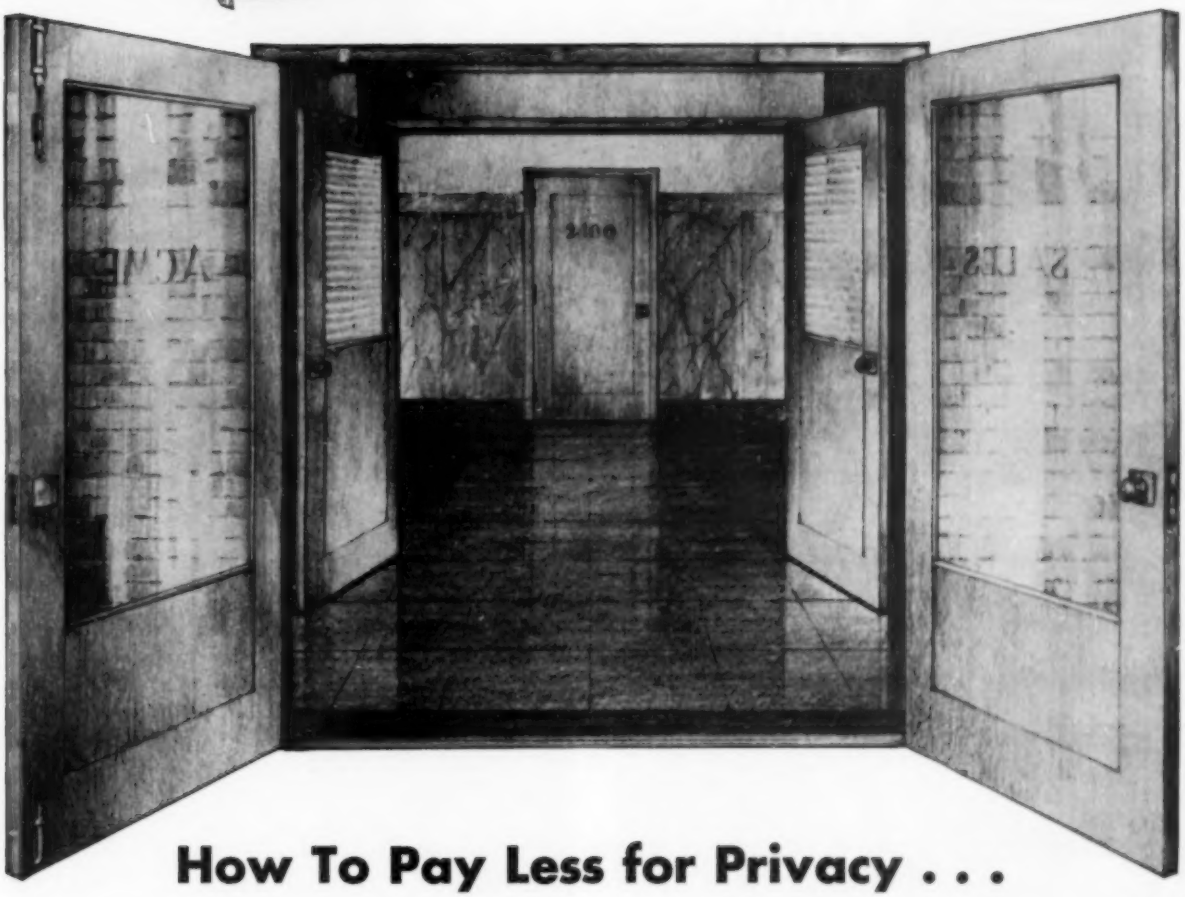
"A salute to those who made it possible" *



How To Pay Less for Privacy . . .

Now you can save up to $100 per door! Just *compare* the cost of Fenestra® Hollow Metal Door-Frame-Hardware Units with the cost of some other brands of hollow metal doors.

Here's why you save so much:

1. *They cost less to buy* because they are mass produced on special jigs that eliminate expensive time and labor. You get production-line economy —*not* custom job costs.
2. *They come to the job complete*—pre-fitted frame, door and hardware are made for each other. No time lost in planning or trying to order separate elements that will fit each other.
3. *You save on installation cost* with these complete units. There's no cutting or fitting or mortising or tapping—the door is *in* and *in use* in minutes.

And you continue to save on maintenance because Fenestra Hollow Metal Doors can't warp, swell, stick or splinter. They always open easily . . . smoothly. And they close quietly, because the inside surfaces are covered with sound-deadening material.

For strong, solid quality at unusually low cost, check on Fenestra Doors—there's a door for every purpose in the Fenestra line: Entrance Doors, Flush or Regular Interior Doors with glass or metal panels, Doors with the Underwriters' B Label. For pictures and details, write the Detroit Steel Products Company, Dept. PA-5 3409 Griffin St., Detroit 11, Michigan.

* Your need for lower building costs encouraged us to develop a quality door unit that would save initial cost and installation cost—Fenestra Hollow Metal Door-Frame-Hardware Units . . . a great advancement in building products.

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ALWAYS SPECIFY HAWS ELECTRIC WATER COOLERS

When you specify HAWS Electric Water Coolers, you are specifying a source of refreshing drinking water that is:

- Consistent in good design
- Consistent in sanitation
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There is a HAWS Electric Water Cooler for every requirement.

See Sweet's... or write for new HAWS Catalog...NOW!

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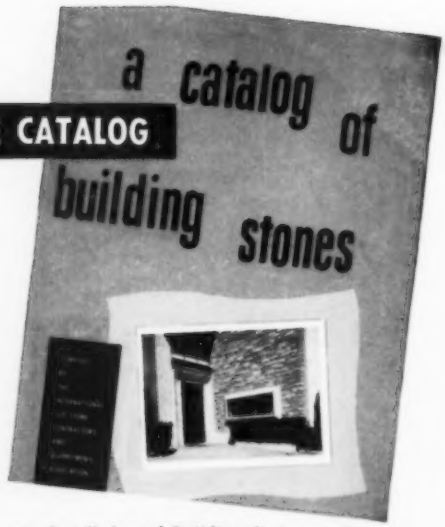
STONE CATALOG



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aids in air-conditioning at Howard Johnson's
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KOOLSHADE SUNSCREEN on this new and inviting Howard Johnson restaurant blocks out about 90% of the sun's heat rays. The result is customer comfort with a reduced load on the air-conditioning equipment.

The thin, bronze louvers of KOOLSHADE SUNSCREEN are scientifically positioned to prevent glare, yet provide full visibility and the free circulation of air.

For the complete KOOLSHADE story and information about Ingersoll's new heat gain calculator, write to Ingersoll Products Division, Borg-Warner Corp., 310 So. Michigan Ave., Chicago 4, Illinois.

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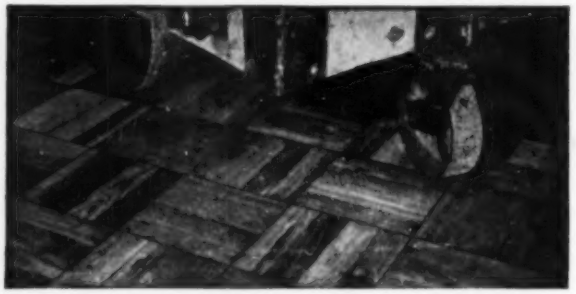
Ingersoll KOOLSHADE Sunscreen



NEW Heavy-Duty Industrial Floor For Use Over Concrete

Bruce Dura-Wood Blocks are made of tough, long-wearing Hickory and Pecan (33/32 in. thick). Installed in mastic over concrete, this economical factory floor resists wear and abrasion, will not powder or dust like hard materials. There's less wear and tear on power trucks, less damage to tools and machined parts when accidentally dropped on floor. Workers find Dura-Wood Floors warmer and less fatiguing underfoot. Write for literature and complete information.

E. L. BRUCE CO., Memphis 1, Tenn.

BRUCE Dura-Wood BLOCK FLOORS

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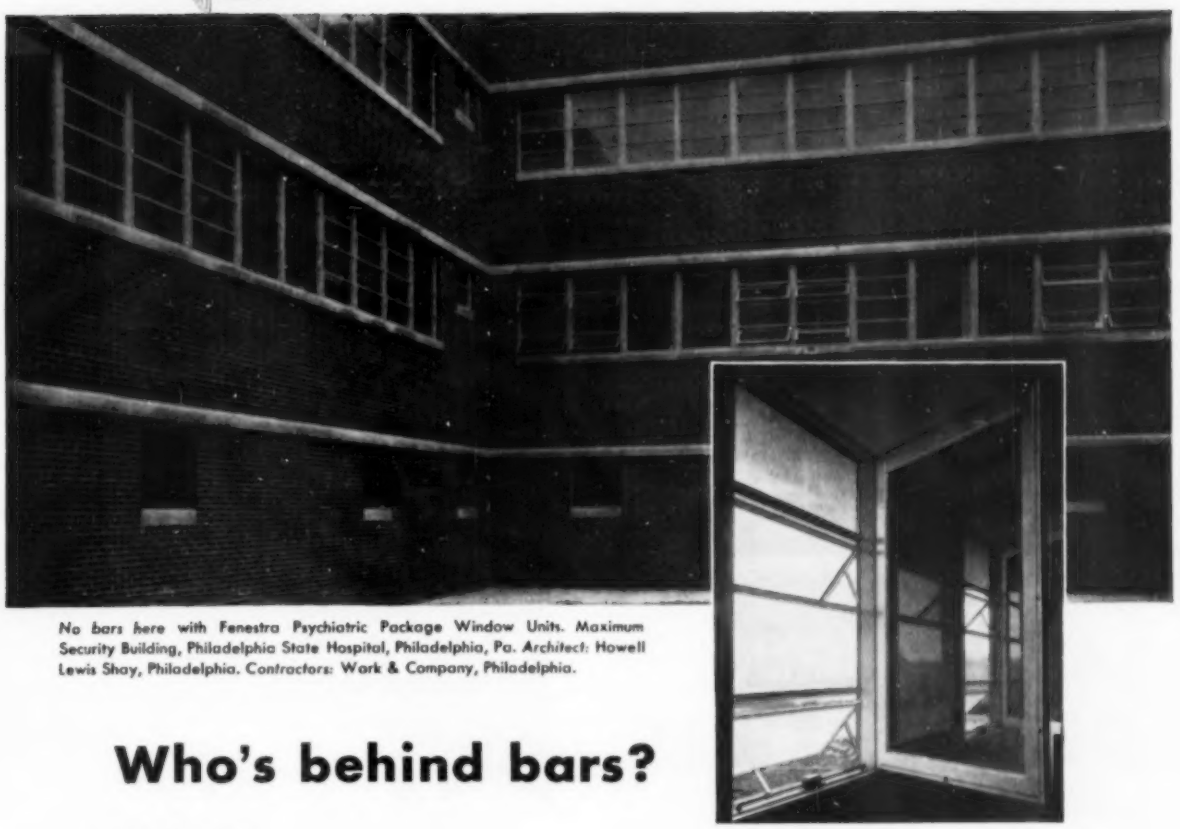


No bars here with Fenestra Psychiatric Package Window Units. Maximum Security Building, Philadelphia State Hospital, Philadelphia, Pa. *Architect:* Howell Lewis Shay, Philadelphia. *Contractors:* Work & Company, Philadelphia.

Who's behind bars?

. . . NOBODY!

Fenestra's new Psychiatric Package Windows in this Maximum Security Building of Philadelphia State Hospital look just like the beautiful Fenestra* Awning-Type Windows you've seen in modern schools, hospitals, office buildings and homes throughout America. This therapeutic benefit is gained without the slightest loss in safety.

The great security provided by Fenestra Psychiatric Package Windows is in their basic *design* and in their *screens.*

The Package Unit includes the graceful awning-type steel window with smooth-working operator and removable bronze adjuster handle . . . and your choice of three types of flush-mounted inside screens: Detention Screen for maximum restraint (tremendously strong mesh attached to shock absorbers concealed in the frame), Protection Screen for less disturbed patients, or Insect Screen for general hospital use.

And look at the safety features: No sills to climb on, no sharp corners. No way for patients to get at the glass. All-weather ventilation, operated without touching the screen. Glass washed inside and outside from inside the room.

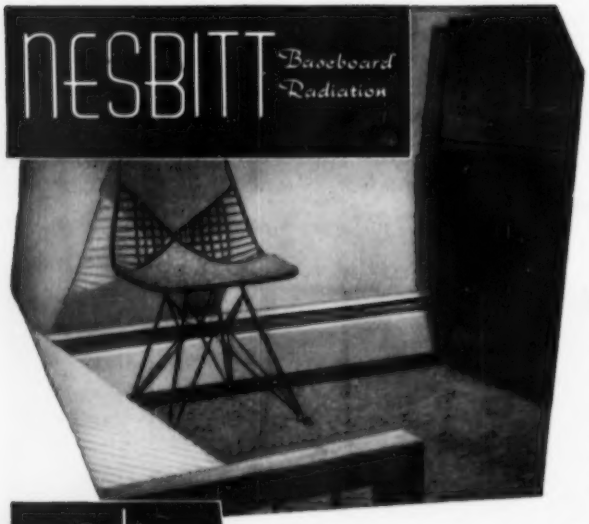
To eliminate maintenance-painting, Fenestra Steel Windows are available (on special order) Super Hot-Dip Galvanized. For full information . . . call your Fenestra Representative, or write Detroit Steel Products Company, Department PA-5, 3409 Griffin Street, Detroit 11, Michigan. *

* Your need for a more homelike, pleasant environment for patients encouraged us to develop a psychiatric window that didn't look like one—the Fenestra Psychiatric Package Window Unit . . . a great advancement in building products.

Fenestra | PSYCHIATRIC PACKAGE WINDOWS

STEEL WINDOW • STEEL CASING • SCREEN • OPERATOR • REMOVABLE BRONZE ADJUSTER HANDLE

NESBITT *Baseboard Radiation*



modern

The new world your art is creating must still be heated. But the radiation of yesterday will not grace the home of today. To complement your advanced design choose Nesbitt Baseboard Radiation—the perimeter convector type of heating that does **more,** looks **better,** and costs **less.** Light weight; high capacity; smart styling; packaged lengths; complete accessories; wholesaler stocks—to simplify design and installation . . . Comfort: as you would expect it of Nesbitt.

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Building material
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Low in initial cost, installation and maintenance. You'll be agreeably surprised at the small cost for such lasting beauty.
Construction detail, data, color samples, estimates, advice on preliminary sketches, will be furnished promptly without charge on Ceramic Veneer, and on Architectural Terra Cotta.

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adjustable top FLOOR and ROOF DRAINS

The adjustable top with rolled thread is completely detachable from the drain body and permits lowering or raising the top to meet the finished floor or roof level before or after the drain body is set in construction. With other types of drains, it is necessary to tear out construction, disconnect pipe, make expensive repairs if the drain is set too high or too low. With Josam Leveleze Drains, the adjustment is simple . . . easy . . . quick!

Josam Series No. 3610
Leveleze Floor Drain

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IMPROVED VINYL-PLASTIC TILE FLOORING

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- Lasts for years!
- Can be installed on, above or below grade.
- Resists dirt, grease, acid, alkali and fire.
- 13 striking color combinations.

Write today for full details!
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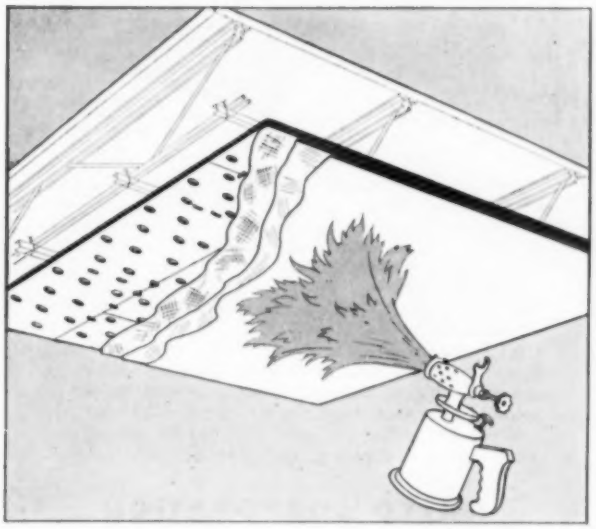
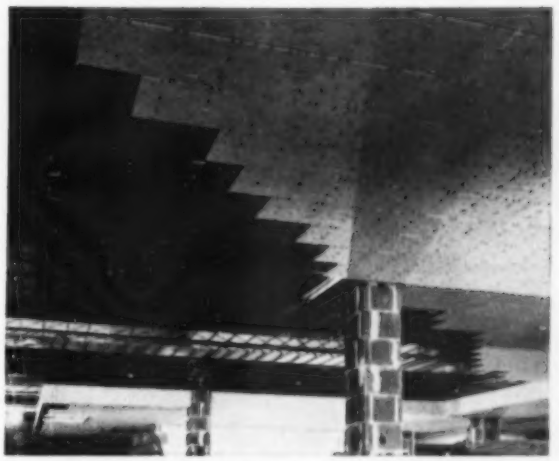
Protect joists with Gypsum Lath and Plaster

Get a 3-hour fire rating

with Gold Bond Clip-Lok System





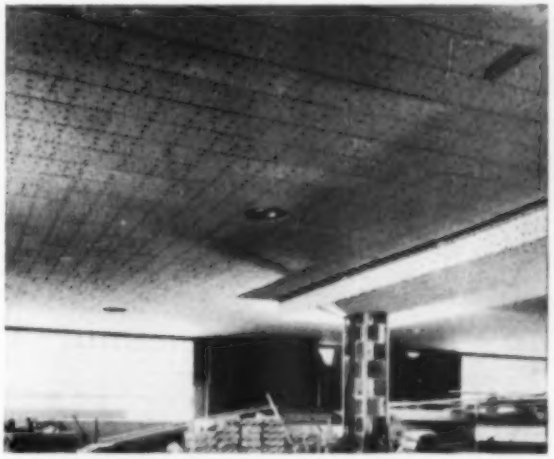
Gold Bond Perforated Lath is attached with Gold Bond Clips to suspended channels. ¾" channels may be attached directly to bar joists with same fire rating.

Fast, simple construction at Remington Rand Pittsburgh office, this economical Gold Bond Way!

CEILINGS like these are built rapidly and easily... and at the same time, you're getting built-in *fire resistance*, too. Gold Bond Clip-Lok System ceilings, consisting of Gold Bond steel channels, gypsum lath, clips and plaster... may be attached to or suspended from bar joist construction. They don't limit ceiling design possibilities because they're especially flexible around fixture openings.

Gold Bond Clip-Lok System provides a rigid and non-sagging, crack-resistive gypsum lath base for plaster. With slight variations, the entire system will provide fire resistant ratings of up to 3 hours... according to tests conducted by nationally-recognized laboratory (name supplied upon request).

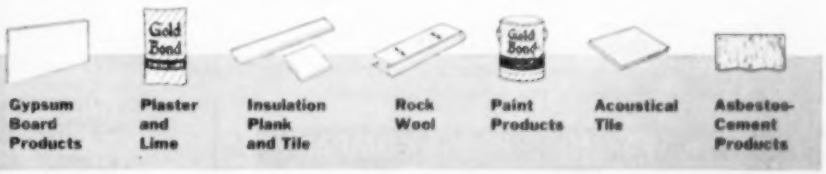
One of the big advantages of the Gold Bond Clip-Lok System is that every component is made by *one* manufacturer. It assures superior product quality and performance throughout. For further details on the Clip-Lok System, refer to page 18, in Section 11b of Sweet's Catalog or write National Gypsum Company, Buffalo 2, New York.



Gold Bond ⅜" Perforated Gypsum Lath ceiling ready for application of Gold Bond Gypsum Plaster. Center clips give positive lath support and eliminate sagging.

Get the undivided responsibility of National Gypsum

Specify **Gold Bond** inside and out



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Parkwood *Tops Anything**

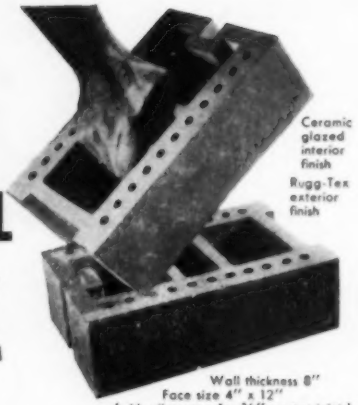
Fabricator: Wooster Kitchen Unit Co., Brooklyn, N. Y.

**Including* counter and work surfaces in this handsome kitchen of National Dairy Products Co. in New York – surfaced in Parkwood *Decorative. Parkflex*, in distinctive wood grains, on vertical surfaces and cabinets. Both protected for a life of beauty and duty by 100% Melamine.

PARKWOOD LAMINATES, INC., 24 Water St., Wakefield, Mass.

NEW NATCO UNIWALL FACING TILE

for single unit wall construction ... finished inside and out



Wall thickness 8"
Face size 4" x 12"
(with allowance for ⅜" mortar joints)

"Uniwall" makes possible single-unit wall construction with finished facing inside and out. "Uniwall" units are made of quality hard-burned, de-aired fire clay, in modular dimensions, but are equally adaptable for non-modular construction.

They are designed with a jamb slot to receive the "fin" of a metal window or the blind stop extension of a wood window.

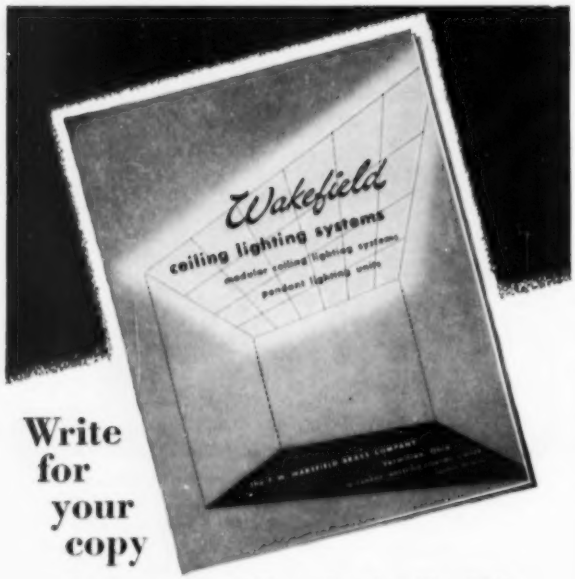
The exterior finish is natural Buff Range, Unglazed Rugg-Tex. The interior finish is ceramic glazed. A complete line of interior ceramic glazed shapes is available to supplement the standard wall units.

Write for Natco Bulletin UW-100 for shape and construction details and unit specifications.

17 Strategically Located Clay Plants

NATCO CORPORATION

General Offices: 327 Fifth Avenue, Pittsburgh 22, Pa.

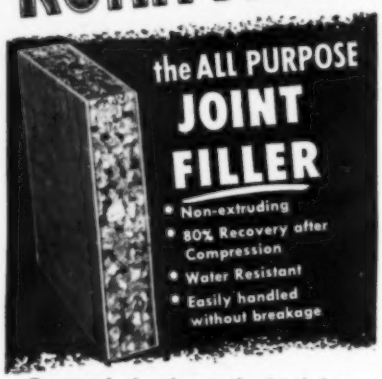


Write for your copy

Compact 8-page Digest Catalog No. 54-S containing basic information, illustrations, drawings, specifications and illumination computations for our complete line of ceiling lighting systems and pendant lighting units.

THE F. W. WAKEFIELD BRASS COMPANY
Dept. P, VERMILION, OHIO
In Canada: Wakefield Lighting Limited, London, Ontario

KORK-PAK®*



Composed of cork granules bonded together with asphalt between two sheets of heavy asphalt-saturated paper, KORK-PAK is the lowest cost, non-extruding joint filler on the market. KORK-PAK is readily handled without breakage . . . and when used in conjunction with Para-Plastic Joint Seal, always provides complete joint filling and protection.

Write for details and prices on KORK-PAK. Catalog sent without obligation.

**KORK-PAK is one of the many Patented products developed for the Construction Industry by Servicised Products Corp.*

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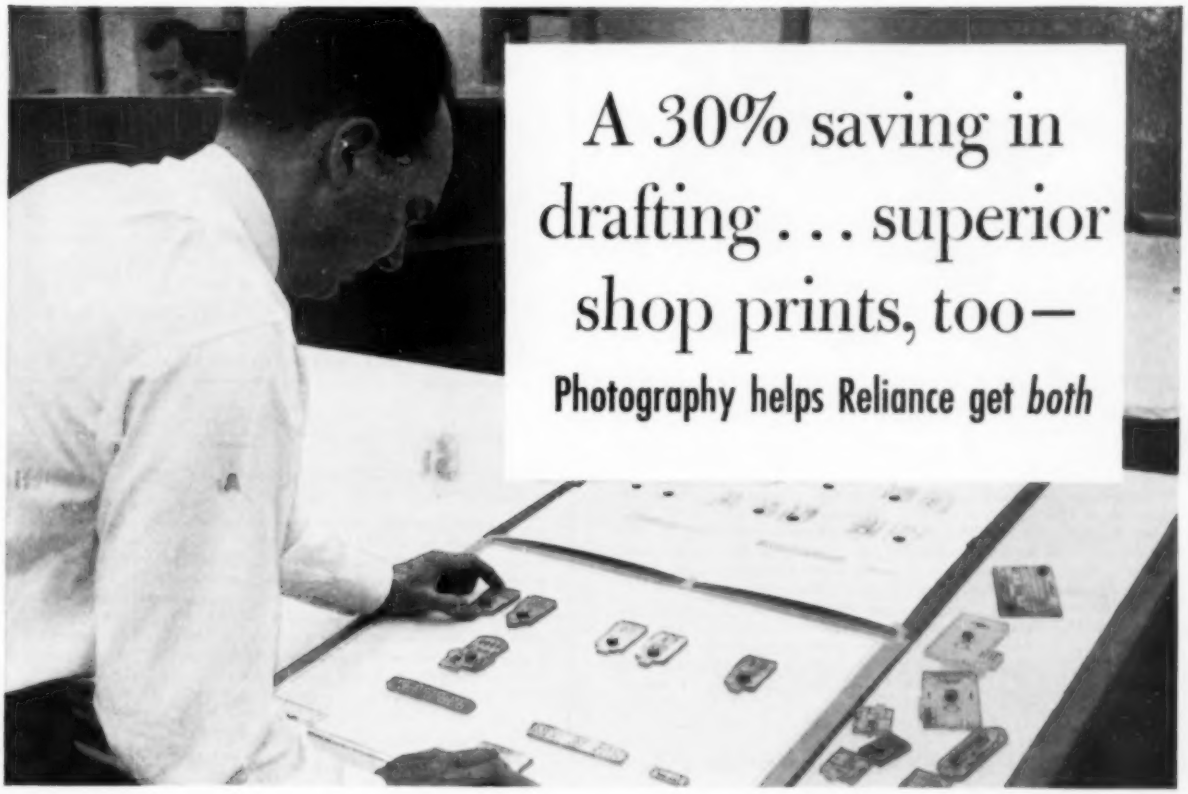

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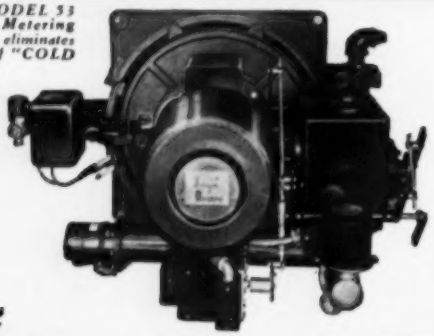

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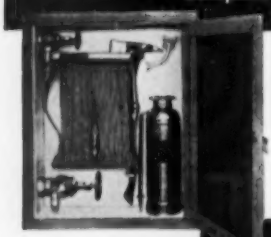

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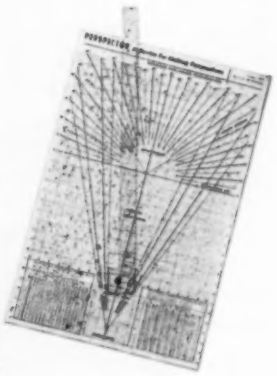

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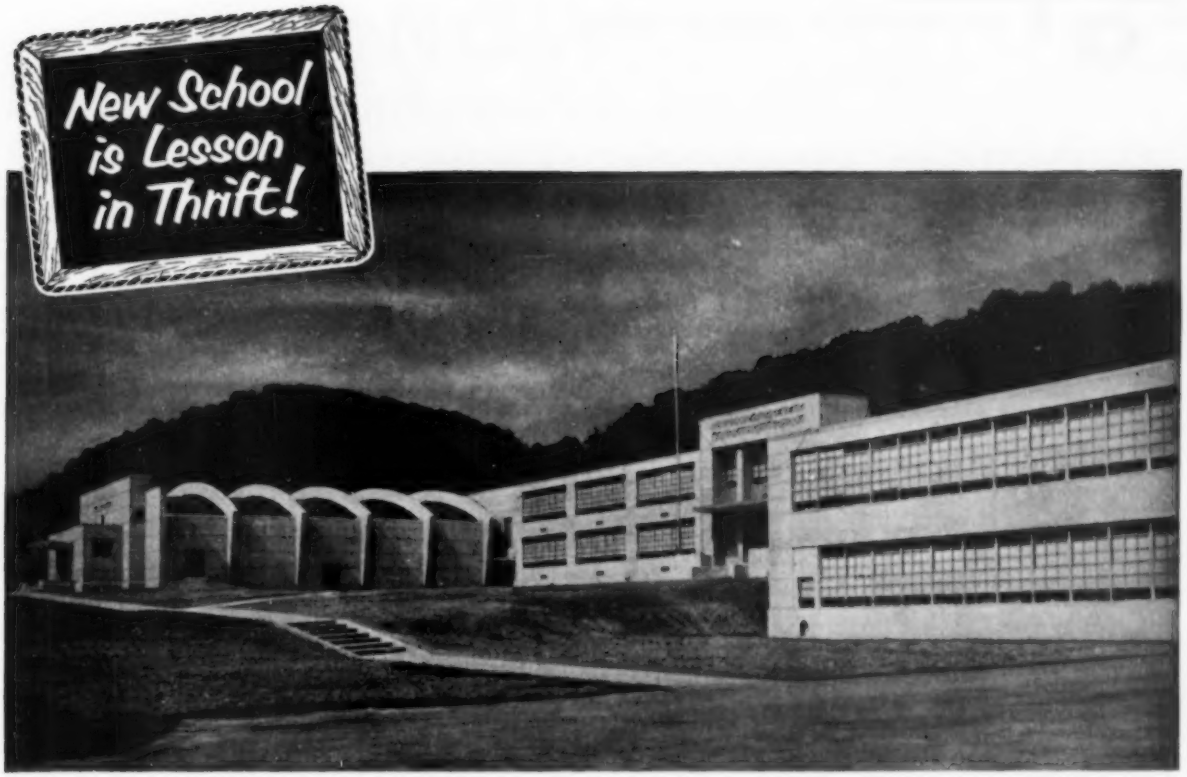

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THE AUTHOR

In the past few years, Bernard Tomson has lectured on architectural and engineering law before several chapters of the American Institute of Architects as well as at regional conferences of that organization. In 1951 Mr. Tomson served as a visiting lecturer in the Architectural School at Massachusetts Institute of Technology.

The author of ARCHITECTURAL AND ENGINEERING LAW is a member of the New York and Massachusetts bars and is admitted to practice before the New York Federal Courts and the United States Supreme Court. He is a partner in the New York law firm of Bernstein, Weiss, Tomson, Hammer and Porter. His clients include architects, engineers, builders and others concerned with real estate. Mr. Tomson is the author of a monthly column "It's The Law" in *Progressive Architecture* and a contributor to other magazines. ARCHITECTURAL AND ENGINEERING LAW is his first book.

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PROGRESSIVE ARCHITECTURE P.S.

I wrote last month of the great urge on the part of architects to write books. I comment on it anew, because the Ernie Kumps paused in New York on their way back to Europe for a few more months of quiet rest, and Ernie tells me (I don't know whether to believe this any more than any other Kump story) that he is using his time in Switzerland to write a book. The picture on this page, was handed to me by Ernie's patient wife, Jo, without comment, presumably as corroboration of his claim.

•

There has often been some question as to the architect's willingness to read, as well as write. Both abilities now seem well established. The current crop of literature proves one; the other has been substantiated by a survey on architectural magazine reading conducted recently by A. S. Bennett-Cy Chaikin, Inc., New York market research organization. I find the results very interesting, and I think some of you students of architects' habits might, also.

This was not the common mailed questionnaire asking "Which magazine do you read?" or "Which magazine do you consider most influential?" I think these are rather meaningless, and I should think the profession might be very tired of receiving them by this time. This was a series of 203 quite detailed personal interviews with principals of architectural firms, selected at random by Bennett-Chaikin from the lists in the Construction Reports Section of the *Engineering News-Record*, with a good geographic and volume-of-work sampling. I don't believe enough in statistical projection to feel that any final conclusions can be drawn, but one can do as the pure scientist does and say, "It seems to be true that of 203 architects interviewed, such and such are the opinions. . . ." Here are some results:

In answer to a question about quality of reporting on the part of the architectural press: 121 said they felt the magazines generally did a good job of showing the effects of economic and social trends on architecture. A fair job, said 52; poor, thought 16; no opinion from 14.

Regular readership of the architectural magazines was indicated by most of the architects interviewed. Competing magazines in this report, other than P/A, are identified only as Magazine A and Magazine B. (You do your own guessing): 76.5% read P/A regularly; 70.4% read Magazine A; 69.5%, Magazine B.

The 203 architects were asked if they saw any "significant improvement in the

editorial job performed by any one of the three architectural magazines." And 90 said they did; 90 said they didn't; 23 weren't sure. However, there was a difference of opinion as to *which* magazine had shown the greatest improvement. Magazine A, I regret to report, drew the support of 50 of those interviewed. P/A got the votes of 48; Magazine B was a poor third, with 17.

Most interesting to me, however, were the reasons. Magazine A's supporters liked "round-table discussions," the fact that "it gets at the money picture," and its "concern with business and political affairs." Those who felt P/A had improved most gave as their reasons, "more progressive," and "more detail . . . not overly general," as well as the regular departments: "legal section helpful," "good Washington coverage," "interiors well chosen and presented," and "NEWSLETTER is informative." In addition, there was a feeling that P/A has a "more practical viewpoint," and, "the architect's viewpoint." Magazine B's supporters, fewer in number, were also less specific. "Presents innovations in technique and design," and "better photography, cuts, and plates," were typical reasons.

Studying which magazine is "most helpful to you in your work," the researchers found a dead heat, with P/A and Magazine A each getting the votes of 43 readers. Again Magazine B was third, with 30 votes. Fifty thought all three were equally helpful; 13 chose two magazines to support; 22 found none of us a help.

What I was particularly interested in was not these preferential votes, but which parts of the three magazines were well read. For sections or departments appearing in all of the magazines, the following percentages of regular readers admitted reader attention:

	P/A	Mag. A	Mag. B
Building Presentations	91.6	89.5	93.6
Details and Standards	83.9	79.0	77.3
Technical articles	83.2	78.3	79.4
News	67.7	77.6	63.1
Reviews	51.0	54.5	42.6

In other words, attention to the regular building presentations is greatest on all three papers. In a comparative sense, Elmer Bennett's SELECTED DETAILS are more popular with our readers than the *Record's* Time Saver Standards and Harold Sleeper's new Design Standards in the *Forum* are with theirs. Our technical pieces, edited by Burt Holmes, get more attention from P/A's audience than the comparable sections in *Record* and *Forum* do from theirs (though all three get good readership for these articles). The reason for this was apparent in specific comments reported: the technical article *related to* a building presentation, which we began to do some time ago, was favorably commented on, over and over.

In PROGRESSIVE ARCHITECTURE, the other regular features and departments that were evaluated pulled the following percentages of our readers:

INTERIOR DESIGN DATA	85.2
PROGRESS PREVIEW	66.5
IT'S THE LAW	65.2
SPEC SMALL TALK	50.3
OUT OF SCHOOL	43.9

The magazines were received at home by 62 respondents. (P/A by 39, Magazine A by 37, Magazine B by 29.) Taking into the picture those who receive the magazine in the office but take it home to read, 65.5% of those interviewed read P/A at home.

Filing habits were studied, also: 91% of the architects said they keep the magazine on file (P/A more than the others) and 59% said they clipped or marked for special attention certain articles. Studying reaction to advertising, the researchers found that 82% read the ads; 67% found advertising helpful.

Asked what sort of editorial material would make the magazines more useful, the architects mentioned cost data most often, technical information next. More ON OFFICE PRACTICE, PUBLIC RELATIONS, SPECIFICATOINS (which P/A alone covers) and more "one-topic issues," were frequently requested.

Although the tabulated returns are unidentified, my favorite respondent was one who said, "Mr. Creighton is good." The one I'd like to know for another reason simply said of *all* the magazines, "Their ideas are moronic."

Actually, I think the study as a whole —the first one I know that really objectively investigates architects' reading habits with any penetration—is valuable as an indication of professional attitudes, prejudices, likes and dislikes, needs satisfied and needs unfulfilled. If any of you would like to have a copy of the report, I'll be glad to see that you get one.

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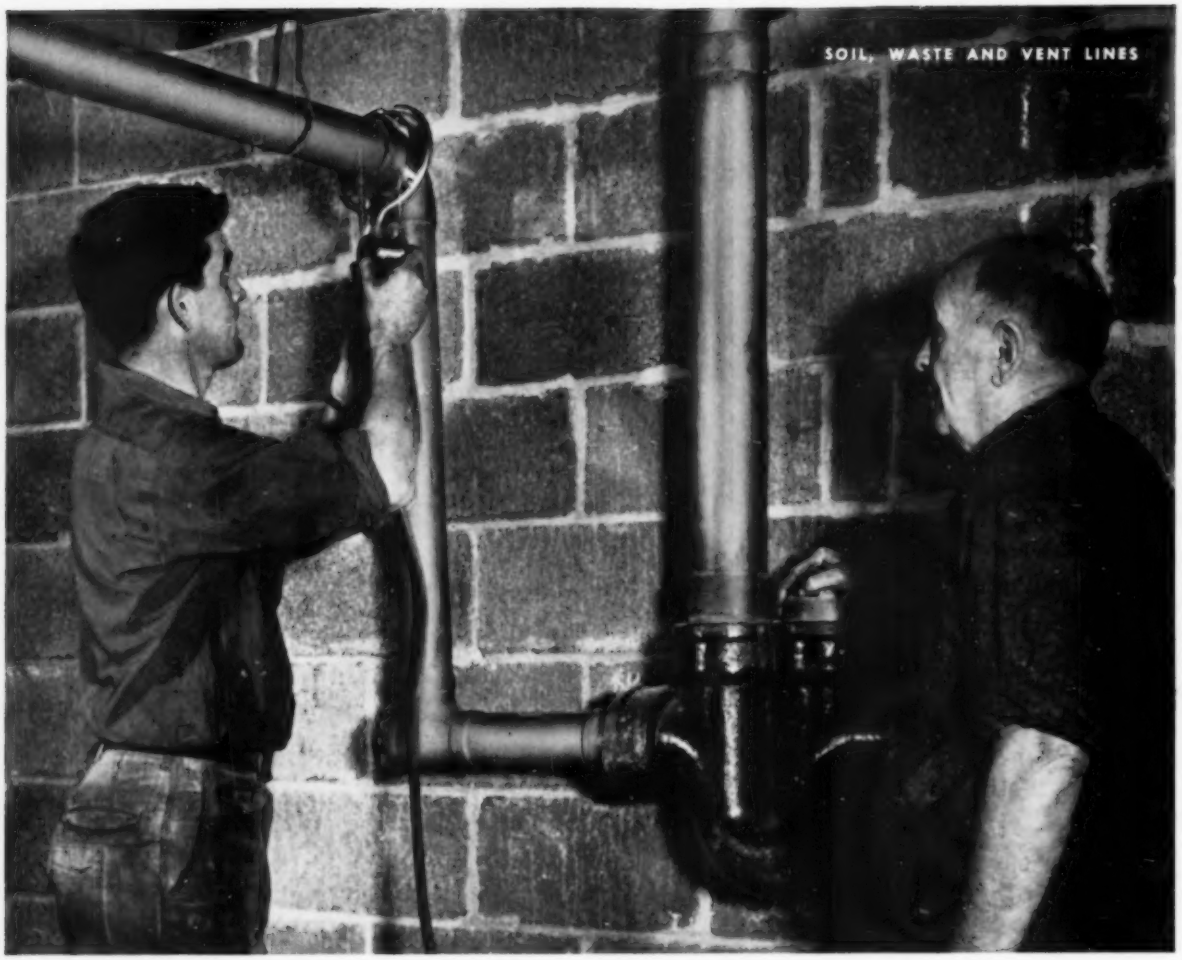

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